THE LANCET.

VOL. II.] LONDON, SATURDAY, AUGUST 19, 1837. [1836-37.

LECTURES
ON
MEDICAL JURISPRUDENCE,
NOW IN COURSE OF DELIVERY,
AT THE
UNIVERSITY OF LONDON.
BY PROFESSOR A. T. THOMSON.

LECTURE XLIV.

ORGANIC ACRID POISONS.—*They seem to act topically, not through the vascular system.—Cantharides as a means of murder, and as an aphrodisiac. Examples. Their unhappy effects on a parson. Post-mortem appearances. Treatment. Efficacy of camphor.*

VEGETABLE ACRIDS.—*Elaterium. Dr. Paris's experiments to obtain the active principle. Effects produced by the poison. Explanations of Orfila of Paris. Treatment.—Euphorbium. Poisoning therewith. Orfila's experiments with it on dogs.—Croton oil. Poisoning therewith; rarity of such cases. Treatment.—Colycynth. Poisoning therewith. Treatment.—Staveacre. Mezereon. Savine. Creosote. Poisoning with these. Treatment.*

GENTLEMEN:—The consideration of inorganic acrid poisons being concluded, we have now to examine those belonging to the same class of poisons derived from the organic kingdom. The chief distinction between these and inorganic acrid poisons, depends on the active principle being modified by, or combined with, some inert matter.

Few of them appear to operate as poisons by any influence which they exert through the vascular system, but all of them influence the system, seemingly by the effects of the topical action which they produce on the tissues to which they are applied, and this being conveyed to distant parts through the nerves.

The only animal poison correctly belonging to this class is—

1. CANTHARIDES.

The Spanish fly, Cantharis *officinalis*, is a coleopterous insect. Cantharis has been used as an instrument of murder, and it has been also employed by the suicide; and when incidently used as an aphrodisiac, to stimulate the exhausted powers of the debauchee, it has proved poisonous. It has also been employed to procure abortion, and sometimes to play off practical jokes, by unreflecting young men. It has proved poisonous when overdosed as medicine.

Among the numerous cases of murder effected by cantharis, we find one of a person named NICHOLAS, to whom it was administered as a love-powder, by one VAUX, who was condemned and executed for the act: it was also the agent in the murder of Sir THOMAS OVERBURY, by the EARL OF SOMERSET, in which case it was administered in sauces.*

A fatal case of suicide by cantharis is detailed in the "Gazette de Santé," for May, 1819. Two doses of grs. 24 were taken at the interval of a day. The self-destroyer in this case was a pregnant female. Great visceral irritation and miscarriage followed, and death took place on the fourth day.

FODERE mentions a fatal case, in which ℥iv. with ℥j. of sulph. of magnesia were taken. A drachm of the powder, however, has been swallowed without being followed by fatal effects; and, in one instance, which came under the care of Dr. FRANCIS, an American physician, f ℥vj. of the tincture were taken, without being productive of any mischief; but these cases may be referred to a peculiar idiosyncracy.

From the influence of cantharis on the urinary organs, much injury and some deaths have followed their use as aphrodisiacs. In the fatal cases of this kind gangrene generally supervenes. An instance is detailed by AMBROSE PARE. The person was an Abbé, who was travelling, and having gained the good graces of a widow, in a village where he stopped, she put cantharides in some comfits which she made, to stimulate his love. On the following day

* See Hargreave's State Trials.

the poor Abbé passed bloody urine, and had violent priapism, and other symptoms which indicated poisoning by cantharides. The food and remedies were the worst he could have been ordered, namely, fat meat and oleagenous matters, and he died of gangrene of the penis.

In addition to these cases Orfila quotes, from the "Recueil Periodique de la Société de Medicine de Paris," t. x., the case of two brothers who had swallowed a considerable quantity of the powder of cantharides in chocolate. Three weeks afterwards one of them died of dysentery, and in two months and a half, the other, having come to Paris for advice, died in great torture. Post-mortem examination of the body displayed the stomach and duodenum covered with fungous tubercles, various and numerous small ulcers, but neither the kidneys nor the bladder displayed any marks of disease.

In the "Medical Gazette," of March 26, 1836, are recorded three cases of poisoning by cantharides. A negro stole a bottle of rum, in which 3vj. of cantharides had been macerated, for an external application to a horse. The thief tasted the liquor, but not relishing it, he gave it to three other negroes as bitters. One of them had just supped, the other two drank the tincture on an empty stomach. Soon afterwards all three complained of lancinating pains of the stomach, burning in the throat, and great nausea. In two hours violent retching succeeded, and the vomited matters were streaked with blood; they consisted, however, chiefly of frothy mucus. Next morning the pains continued, accompanied with cold, clammy sweats, difficulty of swallowing, and in the evening, salivation. The mucus expectorated was of a pink colour, but there was no disturbance of the respiration, no irritation of the urinary organs, and no pain or tension of the abdomen.

One scruple of sulphate of zinc was given to each, which instantly caused vomiting; then olive oil was administered by the mouth, and enemata of hibiscus *esculenta*, with castor oil, were exhibited. Towards evening the pain had abated, and motions were procured: no blood was passed; but the saliva spit, during the salivation, was streaked with blood. All three patients were now bled, and blisters applied to the epigastrium. The blood was not buffy. Soon after the bleeding strangury supervened, and continued for six days; an important fact, both as refers to such cases, and as confirming the physiological influence of bloodletting in augmenting absorption. It may be argued that the strangury, in these cases, might be ascribed to the blisters; but, in reply, it may be stated that it is a well-established fact, that strangury never follows the application of blisters to negroes.

Each negro had taken about 3ss. of cantharides. All of them recovered.

From the above cases we may regard the following as the *symptoms of a large dose of cantharides*. Burning in the throat, causing difficulty of deglutition, an aversion for fluids, nausea, violent retchings, and vomitings, purging frequently of bloody stools, great heat of the stomach, and severe colic; pains in the hypochondrium; insatiable thirst, (yet sometimes the horror of fluids is similar to what occurs in hydrophobia), and tetanic convulsions. If death do not soon follow, frightful delirium supervenes. In general, the urinary and generative organs are powerfully affected, namely, with heat of bladder, frequent micturition, strangury, obstinate priapism, and, as already stated, gangrene of the penis. Sometimes the venereal appetite amounts to satyriasis; but this is not always the case: on the contrary, instances have occurred in which neither the urinary nor the generative organs have been affected; nor has there been any venereal excitement: these cases are the most rapidly fatal.

The *post-mortem examination* displays the mouth and gullet inflamed, and sometimes denuded of their usual coverings, and blistered.

The *stomach* displays marks of violent inflammation, occasionally of ulceration. Some remains of the powder are generally found in it.

The *duodenum* is similarly affected, and marks of inflammation extend over the intestines; generally the omentum and peritoneum are also affected.

The *kidneys*, the *urinary bladder*, the *ureters*, and the *urethra* display appearances of inflammation, particularly, says Orfila, when death occurs in one or two days after taking the poison.

These observations, and the experiments of Orfila on dogs, demonstrate that cantharides operate chiefly as an acrid poison upon the tissues with which they come into immediate contact; and only on the urinary organs when death does not soon follow, and by absorption into the circulation. The same effects succeed their application to the surface: 3j. has proved fatal, without causing any constitutional symptoms.

This question arises,—What part of the cantharides produces these effects? As no immediate influence is felt, it is probable that digestion first takes place, and the cantharidin of Robiquet is separated, and is the poisonous agent. This is more probable from the fact, that cantharidin mixed in oil blisters, and produces strangury; but experiments are still wanting to prove what influence it exerts. The green acrid oil, on which the odour depends, is a violent acrid.

Other insects, such as the Mylabris *variabile* and *cirhorii*, and the melœ *proscarabaus*, which blister, and cause similar symptoms to those produced by cantharides, when administered internally, have been

found to contain cantharadin, with little of the green acrid oil, a fact which certainly renders the supposition stronger that cantharidin is the poisonous agent.

If a person be poisoned by cantharides, the poison, in powder, is easily recognised. It is even easily detected in the contents of the stomach. It may be separated by immersing the parts in boiling water. This powder, heated in a watch-glass, disengages a fœtid white smoke, and leaves a spongy charcoal. ORFILA has endeavoured to ascertain tests for the tincture of cantharides, but the effects are not distinctive enough from those caused in other animal tinctures to lead to any satisfactory conclusions. We must, therefore, draw our inferences almost solely from the symptoms.

Treatment.—The stomach is first to be emptied by the stomach-pump, and vomiting to be encouraged by mucilaginous fluids. Oil and fatty matters should be sedulously avoided. Bleeding and antiphlogistic means are requisite to reduce the excitement, and the influence of these is aided by the warm bath. To relieve the strangury, Dr. CHRISTISON recommends the injection of oleaginous and demulcent fluids into the bladder: I have seen more benefit derived from injecting a pint of tepid water, containing about ℥j. of laudanum, into the rectum. The most important point in the treatment is to avoid the use of oil. After the observations of M. PALLAS, who ascertained this fact, ORFILA administered oil, in which cantharides were macerated, to dogs; all of them died in a few minutes.

It is very probable that the castor oil given to the negroes, in the case which I quoted, increased the activity of the poison.

M. DEVERGIE mentions the case of a man who was poisoned by wine into which his mistress had put a large quantity of powdered cantharides. He was treated with camphor, both internally administered and externally applied, and in twelve hours every untoward symptom had vanished. It is advantageous to combine the camphor with opium, and administer it per anum, whilst alcoholic frictions with camphor are applied to the neighbourhood of the genital organs and the insides of the arms and the thighs.

VEGETABLE ACRIDS.

ELATERIUM.

This substance, the oxidized feculaceous deposit from the juice which flows from the longitudinally sliced fruit of the momordeca *elaterium*, is a most virulent poison; it produces its effects in very minute doses. From Dr. PARIS' experiments, which have been confirmed and extended by those of Mr. HENNELL, the active principle is less than 1-20th of the elaterium itself; and even of this minute quantity one-half is inactive, so that less than 1-20th of the elaterium is poisonous.

The effects of elaterium are well known, yet its manner of operating is little understood. It is evident that it excites powerful local or topical action on the intestinal canal, especially on the rectum; this, however, differs from inflammatory action, and its fatal effects may be produced altogether independent of inflammation of the mucous membrane. It seems to operate directly on the intestinal exhalants, and to destroy life by the collapse induced by the copious discharge of watery stools which it causes. Dr. PARIS, nevertheless, attributes its fatal effects to its local action, especially on the rectum,—ORFILA, to that on the nervous system. It is probable, however, that this is merely negative, and that there is, in truth, a defect of stimulus in the brain, from the suddenness and copiousness of the discharge of the serous part of the blood; its action, in this respect, resembles the virus of cholera asphyxia.

Cases of poisoning by elaterium can only be detected by the symptoms. Should the fruit be eaten instead of the girken, or cucumber, and cause fatal effects, it can easily be distinguished by the character of the *pepo*, the cuticle of which is hairy. I am not aware of any antidote: the powers of the habit must be sustained by ammonia, brandy and water, and wine, and counter-irritation applied.

EUPHORBIUM.

Every species of the genus euphorbia operates as a powerful and dangerous acrid poison, whether it is applied to the surface or is taken into the stomach. The euphorbium of the shops is the spontaneous exudation from the euphorbia *canariensis*; its poisonous ingredient is a species of oleoresin, which exists in the proportion of 63 per cent. in the euphorbium. I cannot better illustrate its poisonous influence, and the effects produced by it, as displayed on the post-mortem examination of the body, than by reading to you a case communicated to Mr. BRANDE by Mr. FURNIVAL, of Egham, and published in vol. iii. p. 81 of the "Journal of Science":—

"A teaspoonful was administered, by a farrier, in the dark, by mistake, for rhubarb. Mr. F. saw the patient about six hours after the injection of the poison. He described the sensation, on swallowing the poison, to be that of burning heat in the throat and fauces, afterwards communicated to the stomach; incessant vomiting of watery fluid took place almost immediately; the tongue was covered with thick mucus; the pulse very irregular, and at least 150; the patient was in a cold perspiration, and unable to speak intelligibly. An emetic of sulphate of zinc and ipecacuanha was given, and its effects quickened by introducing

the probang into the œsophagus; a small quantity of thin, black fluid only was discharged; both mucilages and anodynes were given, but almost instantly rejected. He lived nearly three days, and on opening the body, eight hours after death, there were found in the stomach several spots of mortification. The coats of the stomach ruptured on the slightest touch; the spleen was very much enlarged, and tore on the smallest force being applied to it; the vessels of the internal coat of the aorta were most beautifully injected with blood, and showed marks of the highest degree of inflammation and vascularity."

From ORFILA's experiments on dogs, it is evident that euphorbium operates independent of absorption, exciting powerful inflammation in the tissue to which it is applied, and destroying life by its consequent sympathetic action on the brain. Indeed this might be expected from observing its action as an errhine. Two drachms, in fine powder, applied to a wound, will kill a strong dog; and from ʒiij. to ʒiv. when it is introduced into the stomach. In cases of poisoning by euphorbium, when the poison is obtained in substance, it is readily recognised. When in powder, the best mode of detecting it is to boil it in alcohol, which dissolves it, and as the solution cools a quantity of inert wax is deposited; on evaporating the solution, a hot, pungent, highly acrid, red, deliquescent resin is obtained.

If you be called in time, the first object is to free the stomach from the poison, by means of the stomach pump, for emetics are not required, as violent vomiting is induced; but this does not effectually clear the stomach. The chief indication is to subdue the inflammatory action by bleeding and active antiphlogistic measures, the use of the warm bath, and the administration of bland demulcent fluids, not acidulated, as all acids augment and extend the influence of euphorbium. Indigenous euphorbia also poisons. The fruit of the caparissias has been mistaken for capers.

CROTON OIL.

The effects of this oil, which is procured from the seeds of the croton tiglium, very closely resemble those of elaterium, but the stools are less watery. The seeds are as active as the oil, and purge violently in doses of a grain: tremors and delirium succeed their violent operation, and that of the oil. I am not aware of any recorded case of poisoning by croton oil, or its seeds, in this country. In India, when either operate too violently, the native doctors prescribe butter, or *ghee*, and dash cold water over the body.

COLOCYNTH.

The decorticated fruit of cucumis *colocynthis* is a well known drastic cathartic. There are many recorded cases of the fatal effects of colocynth. From these, and from experiments on dogs, we are authorized to conclude that it operates locally, as a powerful irritant, and that it is also taken into the circulation. The most satisfactory case is one quoted by ORFILA, from a communication by M. CARRAN D'ANNESY. A blacksmith, who was afflicted with hæmorrhoids, applied for relief to a quack doctor, who gave him two glasses of a decoction of colocynth. He was soon afterwards attacked with severe colic, heat in the belly, purging, and dryness of the throat; in a short time, however, these symptoms abated, and were succeeded by costiveness, great tenderness, and tension of the abdomen, retention of urine and violent priapism, with retraction of the testicles; the skin, on the third day, became covered with a clammy sweat, and he died in a few hours afterwards.

On opening the body, appearances indicative of violent inflammatory action presented themselves in the intestines, which adhered together, and were studded, in some parts, with black spots. The villous coat of the stomach was ulcerated, and the inflammatory appearances extended over the liver, the kidneys, and the bladder. Dr. FORDYCE mentions a case in which an overdose was followed by colic, which continued for thirty years.

The same treatment is necessary in such cases, as in poisoning by any violent acrid poison which destroys by its local action. When it does not quickly kill, it is probably absorbed, as it operates chiefly on the colon and rectum.

STAVESACRE.

The seeds of staphysagria have occasionally been taken by mistake, and have produced fatal effects. They are the seeds of a species of larkspur, Delphinium *staphysagria*: their active principle is an alkaloid, which has been separated from the seeds by M. LASSAIGNE and M. FEUEULLE, and named delphine, or delphia. It is such as you see in the specimen—a white crystalline powder, which is scarcely soluble in water, but soluble in alcohol, æther, and the oils. It has a slight alkaline reaction, combines with alkalies, and neutralizes them; but its salts are not crystallisable.* It has an acrid, nauseous taste. Nitric acid colours it yellow; concentrated sulphuric reddens it before charring it; chlorine, at a high temperature, first colours it green, then of a deep brown; and renders it friable.

ORFILA tried the influence of delphia on dogs, and he found when grs. vj. of it were swallowed, symptoms of violent inflammation were almost instantly produced, accom-

* Ann. de Chem. et Phys., t. xii., l. ii., p. 364.

panied with vomiting, restlessness, giddiness, convulsions, immobility, and death in a few hours. The intestines displayed appearances of extensive inflammation. The seeds administered in doses of ʒj. caused the same effects.

In treating these symptoms by antiphlogistic means, it is especially requisite to avoid the administration of acidulated fluids. Orfila found that grs. vj. of the delphine, dissolved in vinegar, killed a strong dog in forty minutes. This is what might be expected from the insoluble nature of all the alkaloids in aqueous fluid, and the soluble nature of their salts; thence it is the general rule to administer them in acids, when we employ them as medicines, and to avoid the employment of acids in cases of poisoning by any of them.

MEZEREON.

This is the bark of a well-known species of Daphne. Every part of the plant is poisonous. Children often eat the berries and suffer. Its active principles are acrid resin, and an alkaloid which has been named daphnina.

In the "Flora Suecica" Linnæus details the case of a lady who was killed by eating twelve of the berries only.

The bark of the root, when moistened with vinegar and applied to the skin, vesicates, and when introduced into the stomach of dogs kills them, with symptoms of the most powerful inflammatory action. Three drachms kill a strong dog in fourteen hours.

Post-mortem examination of dogs killed by mezereon, displays the mucous membrane inflamed, with ulcerated spots, especially in the duodenum. Vicat has recorded a case of poisoning by mezereon, which was administered as a remedy in dropsy: it brought on hypercatharsis, and the case terminated fatally.*

Treatment, antiphlogistic.

SAVINE.

The volatile oil of Juniperus *sabina* has been used to cause abortion. In the case of Miss Burns, for whose murder a person was tried at Liverpool, some years since, criminal abortion had been effected; and this oil was supposed to have been the principal agent in effecting it. Orfila, however, mentions a case where a woman took 100 drops for twenty days, yet carried her child to the full time. It has no direct action on the uterus, but by contiguity, when it operates violently as a purgative.

The poison, if taken in substance, is readily recognised by its appearance, namely, that of a dark green powder; and, also, by its peculiar odour, which, when once smelt, is always again readily recognised.

* Hist. des Plantes venen., p. 140.

CREOSOTE.

This substance is now very extensively employed as a medicinal agent. I have seen two cases in which it operated in a manner which might be regarded poisonous; and, as it may be overdosed, or taken by mistake, it is proper that you should be familiar with its mode of acting, and the extent of its influence.

The only experiments with it upon quadrupeds with which I am acquainted, are those of M. Miguet, published in the 'Recherches Chim. et Med.," Paris, 1834. He found that insects, namely, flies and spiders, are poisoned in two minutes by immersion in fʒij. of water, containing twelve drops of creosote. A dog, two months old, took with impunity, for eight days, eight ounces of distilled water containing four drops of creosote. This dose was doubled, and taken, also, for eight days; the animal lost strength, suffered from nausea; twitchings in the tendons, intermittent rigours, and a marked emaciation. The use of the creosote was suspended, and the dog recovered.

Two drachms of creosote, in half an ounce of water, were given to another dog; it produced frightful symptoms; namely, immediate prostration of strength; the head of the animal hung down, and it fell upon the ground: deafness, vertigo, a fixed gaze, and a complete loss of every sense followed. The respiration was rapidly interrupted by the formation of a mass of stringy mucus which choked up the larynx, and brought on a suffocating cough, which threw off masses of thick albumenous-looking sputa: by degrees the embarrassment of breathing increased, rigors supervened, with spasm, and the animal died at the termination of two hours.

On opening the body, every tissue smelt powerfully of creosote; appearances of inflammation in the mucous tissue were evident; the lungs were gorged with dark-coloured blood; the brain was in a natural state; and some small clots only were found in the cavities of the heart.

Devergie mentions the case of a lady who was employing creosote for the relief of toothach: inflammation of the gums and the lining of the cheeks supervened, and terminated in an abscess of the cheeks, with ulceration of the gums.

Creosote, therefore, if taken in poisonous doses, appears to operate as a powerful topical stimulant, and to destroy life by the nervous sympathy which this induces.

When creosote proves poisonous, it is best distinguished by its odour, which closely resembles that of smoked meat, with somewhat, also, of that of tar. It instantly coagulates albumen. Water dissolves about one-eightieth of its weight; its proper solvents are acetic acid, æther, and alcohol.

In cases of poisoning by it, the whites of

eggs should be freely administered; they are coagulated, and, by involving the albumen, diminish its acrimony on the tissue of the stomach. The expulsion of this coagulum and the creosote, is then to be effected by vomiting, by means of direct emetics. The inflammatory symptoms require to be managed like cases of ordinary gastritis.

LECTURES
ON
MATERIA MEDICA AND THERAPEUTICS,
NOW IN COURSE OF DELIVERY
AT THE
WINDMILL-STREET SCHOOL OF MEDICINE
BY
GEORGE G. SIGMOND, M.D.

Lecture XXV.

Prussic acid.—*Researches into the nature of colouring materials. Discovery of Prussian blue. Its preparation. Different theories of its nature. Efforts made to extend our knowledge of its properties. Scheele's discovery of prussic acid. The purest obtained first by Gay Lussac. Obtainable also from several plants and fruit trees. Its characters. Its dilution for administration. Formulæ for preparing the dilute. Error concerning it in the new Pharmacopœia. Its characters and effects. Formation of prussic acid in the human body. Poisonous effects of unsound cheese, sausages, &c., dependant on prussic acid. The name hydrocyanic acid. Objections to this change. Poison of this acid, of the oil of almonds, and of laurel-water. Peach-nut oil.*

Gentlemen:—I am about to lay before you the history of the discovery of one of the most extraordinary bodies with which we are acquainted, the prussic, or, as it has been very uselessly called, hydrocyanic acid. That the lover of science should dwell with particular earnestness, and with an ardour almost amounting to enthusiasm, upon the first dawn of one of those accidental discoveries which have gradually led the way to a knowledge of some most wonderful phenomena, can not surprise you. We observe the biographer become so wrapt in the life and character of the individual he delineates, that he traces the most minute anecdotes of his infancy, and relates them with earnestness, and with a conviction that they interest the reader as much as they have previously interested him. The historian, too, does not content himself with a detail of the glories which are attendant upon the prosperity of the nation whose annals he illustrates, but he investigates its origin, he strenuously asserts the greatness of its youthful days, and boasts its descent from a very long line of heroes. Most of the marvels which chemistry has exhibited to us have been the result of accidental discovery, but it does not the less detract from the greatness which we ascribe to her labours. Her votaries have investigated the objects which these accidents have placed before them, have examined their powers, have supplied the means by which they are obtained, and have gained from them further engines in the prosecution of their magnificent inquiries. It would scarcely have been imagined that one of the simplest acts of neighbourly kindness should gradually have led to the knowledge of a substance whose very odour poisons the circumambient air, so that the lungs can respire no more, the brain be instantaneously stupified, and the heart, the great centre of life, be, in one swift second, for ever paralysed.

About the commencement of the last century great inquiries into various of the arts which adorn life were simultaneously commenced in various parts of Europe, amongst others the knowledge of imparting colour to porcelain; of dying; of staining; and of calico-printing; this led to various experimental researches, and to the observation of any colouring matter that accident might furnish. That this study, which at first sight appears to be insignificant, is of no small consequence to society, you may deduce from the perusal of a very interesting work by a member of our profession, Dr. Bancroft, on the philosophy of permanent colours, and when such men as Chaptal, Macquer, Reaumer, occupied themselves intensely in promoting and examining every thing connected with it, we may fairly rank it as most important. Diesbach, a chemist living in the City of Berlin, wished to obtain from an infusion, or decoction, of cochineal, in which it was combined with a portion of green vitriol, the green copperas of commerce, the sulphate of iron of the chemist, its colouring matter; he accordingly sent to his neighbour Dippel to lend him some alkali for that purpose, which was accordingly sent to him. On adding this alkali to the solution, great was his astonishment on finding that one of the most beautiful blues was the result. Dippel immediately reflected that the alkali had repeatedly served him for distilling and rectifying animal oils, and that of course it had become impregnated with animal matter; he tried various experiments, and found that it was to the presence of the sulphate of iron the solution owed its colour when the alkali, united to animal matter, was added to it. Deisbach availed himself of this knowledge; the new colour was made, and sold over the Continent under the name of Prussian blue.

In the memoirs of the Academy of Berlin was the announcement made of the discovery, but the means of producing it were kept a secret. This concealment, however, did not prevent chemists from ascertaining the truth, and Dr. WOODWARD had the satisfaction of describing, in the year 1724, in the "Philosophical Transactions," a process for preparing this blue, which had excited the most intense interest. It was from dried bullocks' blood, calcined with potash in a crucible, that the preparation was formed, these were boiled in water, and the liquor filtered, a solution of sulphate of iron was next added, when a blueish green was deposited, which, by the further addition of hydrochloric acid, was instantly changed from a blueish green to a deep blue. The appellation of "lixiviu n of blood" was given to the liquor obtained from the alkali treated with the bullocks' blood, afterwards dissolved in water, and thus prepared to precipitate the iron in the blue state. A cheaper way of obtaining this animal blue was soon disovered, in which the horns, hoofs, hides, tendons, and other refuse parts of animals were employed; this was the result of BROWN'S observations, for he found that flesh gave to the alkali this property as well as blood; in the following year GEOFFROY advanced another step, for he pointed out, from experiment, that oil, wool, hartshorn, sponge, and even a vegetable thyme, calcined with an alkali, had the same action upon sulphate of iron. They endeavoured to explain the new formation by stating, that there was a bituminous principle in the iron which was developed by the blood, and fixed by the alkali. This theory was succeeded by one of MENON, given in the "Memoires des Savans Etrangeres;" he thought that blue was the natural colour of iron, and that the blood purified the metal and insulated its colouring matter. In 1752, MACQUER gained another step; he found that alkalies would decompose the Prussian blue, that they separated the iron from the principle with which it was combined in it, and which he supposed to be phlogiston. In consequence, the prussiate of potash, the ferro-cyanide of potassium of the present Pharmacopœia, was called the phlogisticated alkali. Chemists were all satisfied with this explanation; they felt they knew very little about the theory, but were very wisely prosecuting their researches to discover what bodies were capable, as they termed it, of phlogisticating the alkali, or, in fact, of being substituted for the animal matters that were first used. WEISMAN discovered this property in the empyreumatic oils, MODEL in soot, CARTHEUSER in the ashes of several vegetables, JACOBI in the carbon obtained from the vine, SPIELMAN in the bitumens, and GOETTLING in the fungus.

In the year 1775 another important fact was established by BERGMAN in his dissertation upon the elective attractions; he stated that the colouring matter of the Prussian blue was a distinct acid, and that it had, like other acid bodies, its own particular attraction; and SAGE announced that this animal acid, as he called it, united with the alkalies to form distinct neutral salts, that with potash, having octoædral crystals, that with soda, rhomboids, or hexagonal laminæ. DELIUS and SCOPOLI, DENNEUX and PARMENTIER, and FONTANA and LANDRIANI, all assisted in forwarding our knowledge of the nature of the Prussian blue, but it was reserved for one of those laborious and indefatigable men who cultivate science for her own sake, who desert her neither in riches nor in poverty, and who, when they become surrounded by the pleasures of the world, forget not the beauteous vision that beckoned them on the path of glory, but still worship and adore her;—it remained for one who fell a victim to his ardour, to the good and amiable SCHEELE, by a series of careful experiments, not only to obtain the acid separate, but also to ascertain its constituent principles. Alas! in the midst of these inquiries he was suddenly taken from amongst us, and his death is attributed to the effects of this deleterious acid; but "grateful science still adores his holy shade." His discoveries were printed in the "Trimestres" of the Academy of Stockholm, in December, 1782, and January, 1783; from these we learn the compounds of which the prussic, or hydrocyanic acid is formed; of the properties of this acid, which, before him, no one had succeeded in insulating, we ascertain its intimate nature, both by its decomposition and by its formation in a direct way with materials less complicated than animal substances.

In the year 1787, BERTHOLET communicated to the Academy of Sciences his experiments which led him to believe that the prussic acid was a combination of three simple combustible bodies, hydrogen, carbon, and azote, and he concluded that, as it had no oxygen, it had no acidifying principle. In 1790, FOURCROY pointed out a new fact; whilst treating the serum of coagulated blood with nitric acid he was struck with the smell of prussic acid, he collected the vapour, and found it to be real pure prussic acid.

All these various inquiries only were directed to the consideration of Prussian blue as a pigment. As yet no medical inferences were drawn from it, but soon its wonderful effects upon life became known; a deeper interest began to invest the subject, and many most distinguished chemists aided by their labours to arrive at our present state of knowledge; amongst these GAY LUSSAC, SCHAUB, of Cassel, SCHRADER, of Berlin, BUCHOLZ, of Weimar, ROLOFF, of Magdeburg, BERZELIUS, whose name belongs to the world, and, amongst our own countrymen,

Turner, Porett, and Everitt have been faithful and zealous labourers in the field. Of these we owe most to Gay Lussac, for by him the purity of prussic acid was first established.

The acid is not only obtained from animal substances by laborious and complicated chemical processes, but it resides in several plants, or at least it can be educed from them. In the natural family of the rosaceæ exists a great number of plants which have a deadly principle residing in their leaves and their kernel, and which, when subjected to distillation, yield a fluid which gives a blue precipitate, upon the addition of a saturated solution of iron in carbonic acid.

Some of the species belonging to the almond tribe destroy cattle which feed upon them, as the cerasus capricida, which takes its name from its poisoning the goats in Nepaul. The bitter almond, the cherry laurel, bird cherry, the peach, the mountain ash, the cotoneaster microphylla, the cerasus virginiana,—all of them yield up a distilled fluid, which is marked by a very peculiar powerful odour, which, though it does not bear a similarity to that of hydrocyanic acid, has been compared to it. Vogel, of Munich, obtained hydrocyanate of potash by subjecting the essential oil of bitter almonds to distillation from caustic potash. A volatile oil having the smell of the original oil, but which no longer contained hydrocyanic acid, was distilled over; and this, from a single drop killing a sparrow, he thought to be as poisonous as the acid. This, however, has not been confirmed by the experiments of Stange, of Goppert, of Robiquet, and Boutron Chalard, who think that the acid could not have been entirely removed if the poisonous activity was thus exhibited. Pure and concentrated hydrocyanic acid is a limpid fluid, like water; it evaporates rapidly when exposed to the air; if a drop be suspended at the end of a glass rod, a portion of it is immediately congealed by the cold, which is the result of the evaporation of the rest. It may, according to Dr. Ure, be detected by the sulphate of iron, when mixed with ten thousand parts of water, and the sulphate of copper produces a slight milkiness in water, containing only a twenty thousandth part.

It is volatilized at 68° of Fahrenheit, boils at 78°, and at 5° it becomes concrete and crystallizes in needles, like nitrate of ammonia. It is decomposed by a high temperature, or by the action of light, when carbonic acid, volatile oil, and carburetted hydrogen gas are given out, a carbonaceous matter remaining behind. When brought near to any body in a state of combustion, it instantly burns with a blue flame. Gay Lussac observes, that in preserving the acid in jars, well closed, even without any contact of air, it sometimes decomposes in less than an hour. The pure acid cannot be administered internally, and, in fact, from its speedy decomposition, it could not be depended on for uniformity of strength. Various preparations of hydrocyanic acid have been brought before the scientific world, but that of Gay Lussac is of the greatest purity. He placed the bicyanide of mercury in a retort, to which he adapted a tube about two feet in length, and about half an inch in diameter; pieces of marble were put into one-third of this tube, nearest the retort, and two-thirds of chloride of calcium in the other two-thirds. On the bycyanide of mercury about two-thirds of its weight of concentrated hydrocloric acid were poured, and a gentle heat was then applied. The marble prevented any undecomposed hydrochloric acid from passing, and the chloride of calcium, all moisture. The chlorine of the hydrochloric acid thus combines with the mercury of the bicyanide, and formed bichloride, which remains on the retort. The cyanogen of the bicyanide combines with the hydrogen of the hydrochloric acid, and these form hydrocyanic acid; it is vaporised, and afterwards condensed in the receiver.

The *acidum hydrocyanicum dilutum* of the Pharmacopœia may be obtained either from the ferro-cyanide of potassium, or from the cyanide of silver, and the formulæ are,—Take two ounces of ferro-cyanide of potassium, an ounce and a half of sulphuric acid, and a pint and a half of distilled water; the acid is to be added to four fluid ounces of the water; when this is cooled and put into a glass retort, the ferro-cyanide of potassium is to be added, first dissolved in half a pint of water; eight fluid ounces of the water are to be poured into a cooled receiver, then the retort being fitted on, six fluid ounces of acid are to be allowed to pass into this water distilled with a gentle heat in a sand bath; lastly, six more fluid ounces are to be added, or so much that 12.7 grains of nitrate of silver, dissolved in distilled water, may be just saturated by 100 grains of this acid. The second formula observes that hydrocyanic acid may also be prepared, when it is more immediately wanted, from 48.5 grains of cyanide of silver, added to a fluid ounce of distilled water, mixed with 39.5 of hydrochloric acid; shake all these in a well-stopped phial; then, after some short time, pour off the clear liquor into another vessel; protect this from the access of light, and keep it for use.

The latter of these preparations owes its origin to Mr. Everitt, Professor of Chemistry at the *Middlesex Hospital*, who is as distinguished for the clearness of his views, as he is for the happy mode he has of communicating them to others. In a review of some of the prominent novelties of the new edition of the London Pharmacopœia, with

specimens of "*the great care, pains, and industry*," with which the old edition has been "*revised, corrected, and reformed*," which appeared in THE LANCET a short time since, he pointed out a curious misprint. The "proportion of cyanide of silver nine grains, and dilute hydrocyanic acid nine minims for an ounce of water," ought to be 48.5 grains of the cyanide, and 39.5 grains of the strong hydrochloric acid, to produce an acid of the defined strength, 2 per cent. You will find the duodecimo edition incorrect, and it has led Dr. SPILLAN into the mistake of "the dilute" hydrochloric acid. Both Mr. PHILLIPS and Dr. COLLIER have avoided this error. You will see in the translation by Mr. PHILLIPS some most important observations upon the processes, and upon the properties of this acid. In Dr. REID'S "Chemistry," you will find a view of the chemical changes which occur in the first of these processes, and in the "London and Edinburgh Philosophical Magazine" for February, 1835, you will see the opinions entertained by Mr. EVERITT, and the experiments performed by him. The remarks of the Pharmacopœia tell us that dilute hydrocyanic acid is colourless, and goes off into vapour by heat, which exhales a peculiar odour. It reddens litmus, the colour is slight, is evanescent; is not coloured by the addition of hydrosulphuric acid; on the addition of a solution of nitrate of silver, one hundred grains of this acid precipitate ten grains of cyanide of silver, which are easily soluble in boiling nitric acid. It must be mixed with some other acid, if, upon adding iodo-cyanide of potassium and mercury, it becomes red. "In one hundred grains of this diluted hydrocyanic acid there are contained two grains of real hydrocyanic acid, and to this standard, in whatever manner it may be distilled, we wish that it be reduced." If the litmus paper be strongly and permanently reddened, the presence of some other acid is indicated; if any metallic salt were present, hydrosulphuric acid would discolour it. If hydrochloric acid were present, nitrate of silver would throw down the chloride of silver which is insoluble in the nitric acid; any acid mixed with the hydrocyanic would decompose the iodo-cyanide of potassium and mercury, and form red biniodide of mercury.

Among the startling facts which science has disclosed to us, is one so extraordinary, that we should feel it a duty to doubt it, notwithstanding the highest testimonies of its truth, if actual experiment did not prove it, that the proximate principles of the poison of prussic acid actually are present in our bodies, and may, under some circumstances, be developed. This very poison, a small quantity of which, pure and concentrated, killed Professor SCHARINGER, at Vienna, when diffused upon his naked arm, may be said to exist within us, and circulate in our frames. It can not only be obtained from us with the greatest facility after death, but is formed in certain diseases of the fluids of the body. The blue stain which is imparted to linen from blood in a state of decomposition, owes its colour to this deadly poison. We have detailed to us, by the illustrious Professor of Chemistry, FOURCROY, a very interesting proof of the development of this acid, under peculiar circumstances:—

A female, who was about thirty years of age, was thrown into a state of deep melancholy and nervous despondency, in consequence of great grief, which had for some time been protracted. The principal seat of her bodily suffering was the epigastric region; she became extremely emaciated; hectic fever supervened; there was a livid paleness of the skin. Every symptom announced the general depression of animal power, and a total change in the circulating fluid, or what he terms a decomposition of the blood. After a few days she was seized with convulsive trembling and fainting, which were followed by discharges of drops of blood from the edge of the eyelids, the nostrils, and the ears: the linen with which the blood was wiped was marked with spots of a beautiful blue. FOURCROY was himself the witness of the case, and that the blood contained true prussiate of iron. Monsieur COULLON detected it, by its proper tests, in the menstrual secretion of a young lady who was in delicate health; and Dr. WILLIAM BATT, of Genoa, had under his care a little girl, of seven years of age, who, after much suffering, deposited in the urine a singular sediment, which was collected, and given to MOJON, the Professor of Chemistry, for his examination. He accordingly carefully analyzed it, and discovered it to be a true prussiate of iron, which, indeed, it closely resembled in colour. Of the great importance of further observation on this subject I need scarcely dwell.

Since the observations were made on the presence of the acid in various diseases, many loose opinions have been started, and the dark marks which occur in fever, petechiæ, discolourations of various kinds, have been attributed to it. For the toxicologist, it is necessary to ascertain the truth of such opinions, lest various changes produced upon the human body by disease should be ascribed to the effects of the administration of this poison. Of the circumstances under which it may be developed when the elements that form it exist, we have much to learn; we know that a series of changes are constantly occurring in all the objects of nature; that at every instant of time every particle of matter is entering into new combinations, and that sometimes, from the most innocent materials, spring forth the most noxious poisons. An instance of the formation of prussic acid in the course of the decay of unsound cheese is quoted, as

having been ascertained by Dr. WITLING, and detailed in one of the French Journals. The poisonous property of cheese in this state has, from the attention paid to the subject, by SERTURNER and HUNEFELD, been ascribed to two animal acids, which they consider analogous to the caseic and sebacic acid.

In Germany very great attention has been drawn to the deleterious qualities of decaying cheese, of bacon, and of sausages, which have been the cause of death, with symptoms of a most extraordinary nature. In this country this subject has undergone very little investigation, from the want of a proper medical police, yet instances are not at all uncommon of poisoning from food, taken in a state of decomposition; and, certainly, cholera has been more than once produced by it. The nature of the immediate principle of destruction it is most difficult to ascertain. During the stages of putrefaction the changes that go forward are so uncertain in their duration, the principles evolved are so fugacious, and the rapidity with which particles separate from each other, so instantaneously places compounds in fresh combination, as to render the attention of the chemist almost useless. They baffle his inquiries, and they produce an apparent difference in the labours of the most distinguished cultivators of the science: in an instant one animal acid gives forth such a proportion of its element as to be converted into an acid unobserved before; besides which, all the processes of that decomposition by which Nature removes from before us objects which would be destructive, even from the vapours they exhale, are variously performed, according to the heat, to the moisture, and to the locality of the situation in which they occur.

These difficulties have presented themselves to such a degree, that although it has been long suspected that in some stage of animal, nay, probably of vegetable decomposition, it is the prussic acid which is the cause of destruction, it has not yet been satisfactorily detected.

The vegeto-animal matter of the spurred rye, the secale cornutum, and which when made into bread is so essentially destructive to man, a poison producing the most wasting gangrene of the limbs, contains a very large proportion of hydrocyanic or prussic acid. ROBERT published at Berlin, in 1828, "Dissertatio de secale cornuto ejusque vi, in corpus humanum, salubri et noxiâ," and confirms the fact by analysis, made by himself, with great diligence. VAUQUELIN, PETTENKOFFER, and WINKLER, have also subjected the ergot to chemical investigation; they have not come to any determined result but that this vegeto-animal substance is exceedingly prone to putrefaction. The acids that have been obtained from decayed cheese and sausages have been found most destructive of life. The one approaching to casein, obtained from the cheese, killed a cat in eight minutes, given in the quantity of a drachm and a half, whilst the same quantity of the acid, which was called sebacic, obtained from the sausage, had the same effect in three hours. Dr. CHRISTISON, when observing that the poisonous cheese has been hitherto only met with in some parts of Germany, says that he had some information communicated to him, not long ago, by Dr. SWANWICK, of Macclesfield, which led him to think that a parallel poison is occasionally met with in Cheshire, among the small hill farms, where the limited extent of the dairies obliges the farmer to keep the curd for several days before a sufficient quantity is accumulated for the larger cheeses. That putrefaction renders meat noxious we cannot doubt, and from the facility with which hydrocyanic acid may be procured from it, we may fairly deduce that its latent elements exist in this flesh, and that it may, during a moment of the changes, be fully developed. The facility with which it may be educed, when its component parts exist, may be illustrated by the fact, that the bitter almond will give up its portion to form the acid, when heat and moisture are ready to develop it; thus, when we commence masticating the almond, the saliva gives its hydrogen, and the animal heat lending its aid, we ourselves convert, in our mouths, the innocent fruit into a deleterious poison. I remember on one occasion, at a meeting of the *Medico-Botanical Society*, that Mr. EVERITT, the Professor of Chemistry, fully illustrated this fact, and proved the presence of the hydrocyanic acid, evolved by mastication of the bitter almond, after a very able lecture upon the principles which the labours of the French chemists have proved to exist in the almond, and to which I may hereafter have occasion to refer, although they more immediately belong to the province of the chemist.

The change of name from *prussic acid* to *hydrocyanic acid* I have characterised as useless, but I agree with the observations of the Editor of the "Medico-Chirurgical Review," that it is even reprehensible. In a note to the analytical review of Dr. ELLIOTSON'S cases, illustrative of the efficacy of hydrocyanic or prussic acid, he says,—"The disposition which there exists to obscure the science of medicine, by the invention of high-sounding names, cannot be too severely reprehended. Even the chemists, whose predilection for hard words is notorious, saw enough of technicality in the title prussic to be satisfied. Why, then, should the sons of ÆSCULAPIUS feel so desirous of a change? Is it (which is the only excuse) that they fancied they had found another term more descriptive of the thing signified? If so, grievously, we apprehend, have they erred in judgment." The term hydrocyanic

acid is derived from cyanogen, or generator of blue, because the experiments of GAY LUSSAC rendered it probable that the carbon and azote exist in combination, to form a distinct compound, which is necessary for the formation of Prussian blue. If this compound had been the cause of the blueness of all objects in creation, this name might have been correct, but nothing can more immediately recal the circumstances attendant upon the discovery of this acid than the appellation prussic acid. It was familiar, too, to the public under such a title, to whom it becomes of the deepest importance to know how it is designated, if even it be administered only as a medicine; but as it might be the source of fearful destruction, it is still more requisite that they distinctly know and understand the language which is used.

The poisonous properties of prussic acid were soon observed after its discovery, and more particularly when it was obtained from various vegetable substances; and it was soon understood to what the oil of bitter almonds and the laurel-water owed their noxious influence. It was remembered that as early as the days of DIOSCORIDES, the oil of the bitter almonds had been employed to poison wolves. BOHM, a German chemist, ascertained the actual presence of the acid, and the process pursued by Mr. HENNEL, of Apothecaries' Hall, to detect it, clearly demonstrates the fact.

The essential oil of bitter almonds is obtained after the expression of the fixed oil; the process pursued is to place a hundred weight of the cake which remains after the oil has been forced by pressure out of the almond into the still, with about four hundred gallons of water; this quantity is required to prevent the formation of a collection of mucilaginous dregs, from which the volatile oil will not pass, and which sometimes, if made to boil, rises up into the head and worm of the still. The quantity of oil varies very much, a hundred weight of the cake sometimes giving one ounce, at others two ounces and a half, by weight, of the volatile oil, which seems to be composed of hydrocyanic acid, united with volatile oil. Mr. HENNEN proved this fact, by digesting red oxide of mercury in it, and he thus procured cyanuret of mercury, from which the pure hydrocyanic, or prussic acid, was obtained, by its distillation with hydrochloric acid. In the "Annales de Chimie," the sixteenth volume, are to be found M. ROBIQUET'S examination of the oil of almonds, and he states, in a note, that he believes the oil of the cherry laurel is identical with that of bitter almonds. Numerous are the examples of death produced by laurel-water. FODERE tells us, that whilst attending his studies at Turin, in 1781, the chamber-maid and man-servant of a noble family of that town, stole, for the purpose of regaling themselves, from their master, a bottle of distilled laurel-water, which they took for an excellent cordial, which was kept locked up for the sake of preserving it: fearful of being surprised, they hastily swallowed, one after the other, several mouthfuls of it, but they paid, in a short time, the penalty of their dishonesty, for they expired almost instantaneously in convulsions. The dead bodies having been carried to the University, they were examined; the stomach was found slightly inflamed, and the rest in a sound state.

In the "Philosophical Transactions," in the year 1731, is the narrative of a woman who, after making a quantity of laurel-water, gave a bottle of it to MARTHA BOYCE, her servant, who carried it to ANN BOYCE, her mother, as an excellent cordial. This latter person made it a present to F. EATON, a shopkeeper, who gave two ounces of it to regale MARY WHALEY, who only drank two-thirds of it, and went away. EATON drank the rest. MARY WHALEY went into a shop and complained of a violent pain in the stomach; she was carried home, and from that moment lost the use of her speech, and died in an hour and a half, without vomiting, convulsions, evacuations, or any external change. BOYCE, the mother, when informed of this, would not believe it, and to prove that it was an excellent cordial, poured out into a glass three spoonsful, which she drank, and a few minutes after swallowed two more, so much was she persuaded of its virtue, but she died in a very short time after, without making the least complaint, and without convulsions. EATON, who had taken but little of it, escaped death, by an emetic. FONTANA made an oil by distilling the leaves of the laurel in vessels of glass, without the addition of water; and two, three, and four drops administered to rabbits, tortoises, pigeons, and frogs, killed them very speedily.

Various are the details of the action of the bitter almond on the animal economy, made by GERARD, ORFILA, VICAT, DEYEUX, which prove the deleterious effects they produce. DUHAMEL tells us, in the "Traité des Arbres et Arbustes de la France," that he was almost suffocated by the strong smell of bitter almonds, which was evolved on opening the body of a dog poisoned by these means. The experiments of Sir BENJAMIN BRODIE upon the essential oil are particularly interesting; whilst engaged in them, he dipped the blunt end of a probe into the essential oil, and applied it to his tongue, meaning to taste it, and having no suspicion that so small a quantity could produce any of its specific effects on the nervous system; but scarcely had he applied it, when he experienced a very remarkable and unpleasant sensation, which he chiefly referred to the epigastric region, but the exact nature of which he could not describe,

because he knew nothing precisely similar to it. At the same time there was a sense of weakness in his limbs, as if he had not the command of his muscles, and that he was about to fall; however, these sensations were but momentary, and he experienced no inconvenience whatever afterwards. There is an oil sold under the name of "Peach-nut oil," made from the bitter almonds, by the chemists, which has occasioned death. In one instance a person went into a shop and asked for beech-nut oil, which he wished to take for worms, with some other drugs, according to a recipe which he had received; the wrong oil was given him, and he was destroyed by it. Two drachms of this oil killed a gentleman, forty-eight years of age, twenty minutes, after he had taken it. The physician who was sent for found him insensible, the pupils immoveable, the breathing stertorous and slow, the pulse feeble, only thirty in a minute, the breath exhaling the odour of bitter almonds. In ten minutes more he was dead.

EXPERIMENTS ON THE

PROPERTIES OF THE BLOOD.

The "Journal Complementaire des Sciences Medicales," for April 1837, contains, under this title, a Memoir, by M. Letellier, of which M. Bouillaud is the reporter, presenting to us some new researches on the blood. It must be acknowledged that further experiments for their confirmation are needful; but the labourers are so few in this direction, that the absence of additional verifications should not operate prejudiciously against the present results. M. Letellier endeavours to establish the following positions:—

1. In general the quantity of serum of the blood is in a relative proportion to the water which is contained in that fluid.

2. The separation of the serum from the crassamentum originates in the simple suspension of the circulation of the blood.

3. Acids precipitate albumen, and its colouring matter, in a mass, which is soluble in water. This mass is not coagulable by heat.

4. Fibrin has its origin from the colouring matter, in absorbing oxygen, and disengaging carbon.

5. The acid salts precipitate fibrin in an insoluble mass.

6. Fibrin, which is formed by respiration, is employed for nutrition.

7. In the process of desiccation, fibrin loses more than two-thirds of its weight.

8. Human blood weighs from 1041 to 1058.5. The weight augments by the loss of fibrin.

9. The three principles of blood are globular. The albumen appears to be only suspended.

10. Arterial blood is lighter than venal blood, and contains more fibrin and less serum.

11. Fibrin may change rapidly in the same individual. The other principles of the blood undergo only slight changes.

12. It is the fibrin, only, which appears to have any relation with the febrile movements which occurs in sthenic diseases.

13. The crassamentum, called *inflammatory*, appears to have no relation with albumen.

SOME DISEASES OF THE VITREOUS HUMOUR AND THE RETINA.

Diseases of the vitreous humour have been but imperfectly studied, and the following observations, taken from *Graefe and Walther's Journal of Surgery and Ophthalmology*, Vol. xxv., No. 1, 1837, are merely intended as so many hints towards a more full investigation:—

Discharge of a portion of the vitreous humour has the effect of rendering the image on the retina less distinct, and thus weakening vision.

Contusion of the skull, severe pressure during delivery, and acute inflammation of the eye soon after birth, sometimes produce a deep red colouration of the vitreous humour (*hyaloiditis*), from congestion of blood in the hyaloid membrane.

Softening of the vitreous humour.—Diminution or destruction of the sight, an undulatory motion of the iris when the eyeball moves, a softened feel of the globe, are the characteristic signs of softening of the vitreous body, which appears to depend on the extension of inflammation from the iris to the hyaloid membrane. This softening, however, is often observed in cases of imperfect vision, or of amaurosis, without the oscillating movement of the iris.

Viscidity of the vitreous humour is an affection which is still less understood; it has been observed in some cases, after death, where vision had been lost for a certain time.

Hernia of the vitreous humour is known by the projection of a transparent tumour through an accidental opening into the cornea, or sclerotica, but this can never take place until a great portion of the aqueous humour has been previously discharged with the lens, and the iris has been lacerated or prolapsed.

In *atrophy of the eye* the retina is sometimes changed into a white, fibrous, and

firm membrane; and when amaurosis has existed for many years, the retina is often atrophied, and portions of the nervous layer have, here and there, altogether disappeared. In some of these cases, also, it is marked with black spots.

Ossification of the retina probably only takes place in the vasculo-cellular layer of that membrane; this lesion has only been observed in atrophied eyes.

Medullary fungus of the retina commonly appears below twelve years of age, and sometimes as an effect of contusions. The symptoms are at first diminution of the sight, and immoderate sensibility of the retina, soon followed by insensibility of that membrane, dilatation of the pupil, and immobility of the iris; a deep-seated pain occupies the eyeball, and soon spreads over the forehead, top of the head, and neck; the blood-vessels of the conjunctiva appear injected; on looking deeply into the eye we discover an irregular yellow or greyish spot, traversed by small vessels. The pain is more severe during the night; the spot, or body, now penetrates into the posterior chamber, and seems to traverse the widened pupil; gives a yellow colour to the aqueous humour; pushes before it the cornea, until the latter nearly gives way, and then appears as a circumscribed, soft, somewhat elastic tumour, which gives the feeling of deep fluctuation. When the whole of the tunics covering the fungus have given way, the tumour projects gradually between the eyelids, and presents all the appearances of medullary fungus. If the eyeball be extirpated at this stage the tumour seldom fails to return in a few months; if left to itself, the disease progresses, the patient gets weaker and weaker, severe hæmorrhages ensue, convulsions set in, and death terminates the scene. If the eye have been extirpated during life, or examined after death, the retina, at a certain period of the disease, is found to be destroyed, or replaced by the medullary tissue. In recent cases the choroid is but little altered; in more advanced stages it is thickened; the fluids of the eye are replaced by an encephaloid, bloody, or dark-coloured mass; the optic nerve is commonly tumefied and hard, or occasionally softened, dark-coloured, and mixed up with the fungous mass which surrounds it. This lesion sometimes extends along the optic nerve, as far as the optic thalamus, which is softened, and discoloured with blood and serum; in such cases the neighbouring membranes of the brain are red, thickened, and contain a sanguineous or purulent fluid.

Excessive sensibility of the retina is produced by various causes, such as, constant action of artificial light; excessive exercise of the visual organ; excessive venery, &c.: it often accompanies diseases of the skin and uterus, or hæmorrhage; or follows convulsions, or, most frequently, inflammation of some part of the globe of the eye. This affection, the attacks of which are commonly intermittent, sometimes gradually disappears; more frequently it continues for several years without much change for the better or worse: in the most severe cases the retina loses its sensibility, and the power of vision is finally destroyed.

Intermitting and excessive sensibility of the retina, or *tic douloureux of the eye*, is characterised by violent pulsating pain, which attacks the globe during several hours a day, and is accompanied with a dragging sensation, and discharge of tears, and a species of pulsative feel in the lids. When the pain is very severe, the conjunctiva is often injected. It is also commonly attended with tenderness and excessive secretion of the latter membrane.

RESPIRATORY PARALYSIS OF ONE HALF OF THE FACE AND THORAX.

A GIRL of delicate constitution, though enjoying good health, twelve years of age, laboured from fifteen to eighteen months, without any discoverable cause, under an irregular action of the muscles of the face, while speaking, laughing, or crying.

The right side of the face seemed insensible to all impressions made on the mind, and exhibited no stronger action of its muscles when respiration was accelerated. They were, nevertheless, as capable of moving as those of the opposite side. The sense of feeling was not altered; the motions of the jaws, during mastication, were perfectly free on both sides.

On looking at the child, when the face was in a state of repose, it was not easy to discover any great difference between both sides, but on the mind being roused, or when the child spoke, the unequal action of both sides of the face was at once evident; however, the injured side was somewhat leaner than the other, especially at the chin, where the quad. menti seemed absent.

A similar condition of the muscles of the right side of the thorax existed. The vertebral column, between the shoulder-blades, presented a deviation to the left side of one-third of an inch, and the right half of the thorax seemed contracted in all directions. The point of the sternum was somewhat turned to the left side; the right shoulder was lower than the left. Both upper extremities were equally developed.

Pressure on the abdomen with the flat of the hand showed that the right side of the chest took little or no part whatever in producing the phenomena of respiration, which were carried on in the left side.

The treatment employed was, at the commencement, antiphlogistic and derivative;

afterwards, local stimuli were applied, with the electric shock. The child was then sent into the country, and ordered to take tonics; under these remedies the affection of the chest completely disappeared, and that of the muscles of the face made no farther progress.—*Caspar's Wochen.* 1837. No. 3.

This is a very curious case, and well worthy of the attention of physiologists. If the facial nerve, as most authors of the present day admit, possess two distinct functions, one of voluntary motion, the other respiratory, we find one of these functions completely suspended, while the other remained intact. Under Sir C. Bell's theory it is not easy to explain the case, and we are inclined, with its author, Dr. Stroymeyer, of Hanover, to have recourse to the theory of reflex function to account for its phenomena.

TRANSPLANTATION OF THE CORNEA, TO RELIEVE BLINDNESS,

HITHERTO DEEMED INCURABLE.

Among other subjects which have recently engaged the attention of Dr. S. Bigger (L.R.C.S.I.), is the melancholy condition of persons who labour under irremediable blindness, from incurable staphyloma. His first object was to inquire what foreign surgeons had accomplished to repair this defect; but he found that nothing beyond mere palliation had ever been attempted by them except in Germany, where the project had been frequently considered, of *excising a morbid cornea, and replacing it by a healthy structure, taken from some of the inferior animals.* Moesner, at Tubingen, in 1823, from experiments, concluded, that as the cornea would not unite with the surface from which it was cut, it would not *a fortiori* unite with any other. In 1824, F. Reisinger replaced the cornea which he had removed from an animal, by another, and closed the lids by a ligature; adhesion took place; and in twenty days one-half of it had become clear. Drolshagen, of Berlin, attempted the operation twice, without success, in 1834; the transplanted cornea united only partially, and became more or less shrivelled and opaque; as also happened in the experiments of Himly and Stilling. It failed, too, in the hands of Dieffenbach. He was of opinion that the foreign cornea would not adhere, or, if it united, that it would become so turbid and opaque as to be wholly unserviceable. Dissatisfied with such conflicting opinions, Dr. Bigger commenced a series of investigations on the subject, having met with an inaugural thesis, published by Thomé, in the Friedrich Wilhelm University, on the Rhine, in which eight experiments are detailed, all followed by very considerable success*.

At last, Dr. Bigger rendered the removal of the cornea easily practicable. Having fixed, with a ligature, the upper eyelid of the animal from which the cornea is to be taken, he introduces Beer's cataract-knife (holding it horizontally, and at first directing it a little backwards, so as to insure its passing through all the layers of the cornea), with its edge turned upwards, into that part of the cornea which is situated about a line or more from its most inferior junction with the sclerotic, and at about the same distance external to the mesial line of the eye. He then pushes on the knife for the space of one or two lines, inclining the handle, so that the point of the knife may be brought forward, and caused to pierce the cornea again, at a distance as small as possible from the point of entrance. The knife should now be pushed on, when it will make as large a section as may be required, which, being turned down, is to be cut off with a pair of scissors. The eyelids are then to be closed, to prevent the escape of the crystalline lens and vitreous humour. The excised cornea should be placed on a slip of cork, and the curved needles, carrying very fine ligatures (two, three, or four in number), should be passed through the cornea and the piece of cork. The latter, which has been chiefly used as a support to enable the operator to pass the needle through the tough layers of the cornea, should then be broken off, and the cut surfaces of the cornea should be kept moistened with some of the secretion from the eye. The surgeon then proceeds to perform the same operation on the eye to which the cornea is intended to be transplanted. Having done this, and closed the lids for a few moments, until the spasmodic action of the muscles of the eye diminishes, the operator proceeds to adapt the cornea to its new situation, and for this purpose inserts the point of his needle carefully between the margin of the now prolapsed iris and the remains of the cornea, and pressing externally with the nail of the other forefinger against the point of the needle, so as to make it pass through the cornea without dragging or injuring the eye, draws out the needle. To accomplish the latter object, Dr. Bigger was often obliged to use a small forceps, and in this case, the

* The first time Dr. Bigger tried this experiment was in 1835, when he was a prisoner with a tribe of Arabs, on a journey from Grand Cairo. A pet gazelle had lost one eye from inflammation, and the power of seeing with the other, from a wound of the cornea. The cornea was taken from another animal of the same species, brought in wounded, but not quite dead; adhesion took place, and in ten days the animal gave unequivocal signs of vision, the upper part of the transplanted cornea remaining perfectly transparent.

thumb and finger nails of the other hand must be pressed closely and firmly against the cornea, on either side of the needle, to obviate any injurious disturbance or dragging of the eye. The ligatures should then be carefully tied, and the ends cut off. Dr. Bigger has found two ligatures to answer the purpose quite as well as four. Finally, the operator clears away any lymph or blood which may have collected on the eye, and concludes the operation by smearing the eyelids with a little spermaceti ointment.

In operating upon animals, the chief difficulty arises from their struggles; even the slightest motion perils the integrity of the iris, and Dr. Bigger acknowledges, that if the operation were brought to bear on the human subject, the iris would be in very great danger, in cases where opaque albugo intervened between the edge of the knife and the operator. Besides, any unsteadiness of the surgeon, might cause the slipping out of the knife, so that the cornea could not be separated with a single stroke, when it would be highly injudicious to proceed with the operation. To secure small animals, such as marmots, rabbits, &c., the best way is to swathe the animal in long towels, an assistant fixing the head by the ears and chin. In November, 1835, Dr. Bigger operated on two rabbits by a mutual transplantation. In both the lens escaped, and the iris was injured. Great inflammation followed; eighteen days after the operation, the implanted cornea appeared whitish and opaque, and large red vessels could be seen passing from it to the adjacent cornea. The iris was considerably inflamed and irregular, and the aqueous humour turbid and excessive in quantity. After many dangers from inflammation, and at the end of forty days, Dr. Bigger found that the eye in this rabbit was not all injured thereby, but was rather clearer than that of the other, which had gone on improving. In both there were some spots of the cornea perfectly clear; and it was plain, from the motions of the animals, that they could see, although not distinctly. In running to take food presented to them, they seemed to be incapable of accurately calculating the distance of the object, a defect which Dr. Bigger is inclined to attribute to the loss of the lens.

Dr. Bigger's next experiment consisted in removing the corneæ from six rabbits. Two of the corneæ were immediately replaced on the eyes from which they had been taken; the other four were mutually transposed to other rabbits. In two the iris escaped injury, and these were the cases which succeeded best; in those rabbits to which their own corneæ had been restored, the iris became adherent; and in one, the pupillary opening became perfectly closed, so as to require an operation for artificial pupil. In one of these cases the success was very remarkable; vision was much more perfect, and there was less contraction of the implanted cornea. In all, however, the animals continued to enjoy more or less power of vision.

About this period Dr. Bigger became acquainted with the method pursued by Wilhelm Thomé, and performed an operation on a pointer dog which had an opacity of the cornea from injury. The implanted cornea in this case was taken from the eye of a wolf. Two days afterwards the dog escaped to the woods, and nothing was heard of him for three months, when he returned, half famished, but with a very remarkable power of vision in the eye which had been operated on; a triangular cicatrix, about one-fourth of the size of the original piece, was almost all that remained, and very little of this cicatrix intruded upon the axis of vision. It appeared as if the transplanted part in contracting had drawn the clear cornea of the side forward, so that although the operation had only a partial success, it furnished a useful hint with respect to the advantage of removing no more of the diseased cornea than is absolutely necessary, as the sound portion which remains may enact a very useful part in the reparative process. In this case the iris was attached to the inferior angle of the cicatrix.

On his return to Dublin, Dr. Bigger commenced his experiments anew; of these, he has now performed eighteen. The subjects of the first and last experiments, two rabbits, were presented before the King and Queen's College of Physicians, on the 18th of May last, and the degree of vision which one of them evidently possessed, reflects the highest credit on the operator. Of these eighteen experiments, in ten, the iris was injured; in eleven, the crystalline lens escaped; in seventeen, union took place between the implanted corneæ and the adjacent surfaces in forty-eight hours, so as to admit of the withdrawal of the ligatures, which are always a great source of irritation; in four, three ligatures were employed; in fourteen, only two, and with equally favourable results; in twelve, adhesion of the iris to some part of the cicatrix ensued; in one, sloughing of the cornea and destruction of the eye took place, an event which arose from the cornea being kept for half an hour without applying it, with the view of ascertaining how long it would be likely to retain a sufficient degree of vitality to enable it to unite, a delay which may be prejudicial to the operation. Of the whole eighteen, sixteen recovered imperfect vision.

The difficulty of preserving the transparency of the implanted cornea, was constant until his ninth experiment at home, when Dr. Bigger discovered that much benefit might be derived from the local application of bichloride of mercury. A weak solution, gradually increased to three grains

to the ounce of distilled water, dropped into the eye three or four times a day, after the cornea had become adherent, was found to exercise an almost specific action in diminishing the opacity of the implanted cornea. Iodine and nitrate of silver had improved the appearance of the cicatrix, but did not act upon the milky state of the cornea. The corrosive sublimate must be begun with a weak solution, and not used until the implanted cornea is perfectly united to its new connexions.

With reference to the applicability of the operation to man, Dr. Bigger thinks that the chances of success would be greater, so far as regards steadiness during the operation, and such other circumstances. As to the animal from which the cornea would be taken, Dr. Bigger invites comparative anatomists to investigate this point. The animal whose cornea he has found to approach nearest to that of man is the pig, though much thicker and coarser in texture. He thinks, however, that the operation should not be sanctioned under any circumstances, when the patient enjoys even a tolerable degree of vision with the other eye, and that blindness caused by small-pox, ulcers on the cornea, and ophthalmia not affecting the deeper structures of the eye, would be the most favourable for operation. He begs hospital surgeons to give the matter attentive consideration, particularly as experiments and analogy had shown the feasibility of the operation.—*Abridged from the Dublin Journal, July.*

ON THE

CAUSES AND DIAGNOSIS OF TUMOURS.*

By JOHN C. WARREN, M.D.,

Prof. of Anat. and Surg., and Surg. of the Massachusetts General Hospital.

Causes of Tumours.

WHAT is the cause of tumours? An individual making a violent effort of some muscle, has a tumour formed afterwards in the muscle, and we say the tumour is caused by the strain. That is, the strain changes the healthy action of the capillary exhalants of the part, so that instead of their usual deposit they form a morbid substance. Or, he may receive a blow on the testicle, and a disease succeeding, we say the blow is the cause. A female has a mammary abscess, which leaves a chronic induration, and when she reaches a particular period of life, this assuming the character of a scirrhus, we say the induration is the cause. But is it not notorious, that similar accidents occur constantly, and are not usually followed by such results? Of course, it is impossible that those injuries are the simple causes of the morbid action generated in such cases. We must look for accessory causes, such as some peculiarity in the accident, or in the individual. The former is inconceivable, and we are, therefore, compelled to suppose a peculiarity in the constitution of the individual. Such peculiarity may sometimes be fairly suspected, as in the case of a female, one of whose parents had been cancerous; or in a man who had abused his health by the use of ardent spirits. But how many instances remain where no such cause can be seen; and how many cases are there where no cause, either predisposing or exciting, comes within the cognizance of our observation?

Mr. Hunter suggested the notion that a drop of blood being accidentally effused became organized, and assumed a growth independent of the system, and continued to grow until limited by some obstacle opposed to it. The objection already instanced has been offered to this opinion, namely, that effusions of blood take place continually without any such consequence. How far will the following case be considered fact in favour of Mr. Hunter's opinion? A lady, 52 years old, in running across a field to escape from a cow, fell and struck her breast; a swelling arose, which, after some months, assumed the form of scirrhus. I removed it, and in the centre of the scirrhus lump found the remains of effused blood in the interior of a tumour with a thin cyst. She has remained four years without any re-appearance of disease.

Effusion of lymph, or coaguable lymph, from the capillary vessels, has been considered as a possible cause of the origin of tumours. The lymphatic effusion must, of course, become organized, and thus constitute a new-formed substance. Such effusions are common after accidents, and during diseases. We notice them in the cellular texture, in the muscles, in the serous cavities. In the two first of these textures they more rarely become organized, but are soon taken up by the absorbent vessels, and disappear. In the last, organization occurs in a great number of instances, but does not produce a tumour. The effusion of lymph, therefore, is not necessarily followed by tumour, even when it becomes organized. Yet that some tumours are generated in this way, I have no doubt.

A third supposable mode of the production of tumours, is by chronic inflammation of a natural texture. A blow, or the constant irritation of a foreign body, may derange the action of the capillary vessels, and thus bring on a new deposition. I will relate a case here of a person who, while holding a shoe, on which he was at work,

* Surgical Observations on Tumours, with Cases and Operations. By C. J. Warren, &c., Boston (America). 1837, 8vo., pp. 087.

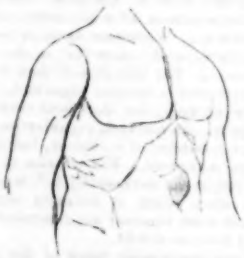
against the chest, allowed it to slip, and received a smart stroke on the cartilages of the ribs, attended with considerable pain. On the following day he perceived a hardness, which increased, and at the end of two years was a formidable tumour.

Tumour on the Cartilages of the Ribs.

Case.—W. M., formerly a shoemaker, now a trader, came to see me in the spring of 1836, with a hard tumour on the cartilages of the left ribs. His history was this. Two years before, while holding a shoe, on which he was at work, against the breast, the shoe slipped under the pressure, and hurt him over the cartilage of the sixth rib. Next day he perceived a slight swelling on the spot. This gradually increased, and was three inches long when I first saw it. The patient is of small stature, compactly made, and has good health.

An operation was advised. To the necessity of this he assented; but having some affairs to transact, he went home, and did not appear again till a year had elapsed.

In March, 1837, he came to the hospital, with his tumour much increased in size. Beginning at the upper edge of the cartilage of the fifth rib, it extended to the lower edge of that of the eighth, and required the breath of six fingers to cover it vertically, and of four to cover it transversely. Its breath lay from the median line to the left, beginning from the linea alba. In colour, the skin was not changed, excepting that it exhibited numerous enlarged veins. In consistence, it had the hardness of a periosteal tumour, that is, something less than that of bone. A degree of sensibility existed on the edge of the cartilage of the fifth rib, and at some other points. It was slightly moveable in a lateral direction, but not in the vertical, and its movement did not appear to affect the ribs. There was a sensible pulsation, without any vibration.



The patient wished to know whether an operation for his relief could be safely performed. The first question was, what is the nature of this tumour? To the eye it had the aspect of osteosarcoma—to the touch, it wanted the hardness of that disease. Was it a disease of the muscles or of the pericondrium? Might it not be a projection caused by internal aneurysm? Did it lie on the outside of the ribs, or might it not extend inwards, as well as outwards?—for there was an obvious dip of the tumour below the edges of the cartilages into the epigastre.

My opinion was that it was a scirrhous tumour of the rectus muscle. This was derived from the first examination, when it was smaller and less hard than it afterwards became. Its extreme hardness led me to doubt afterwards whether this opinion was correct; but on the whole it was the most satisfactory.

As it extended over the edges of the cartilages, it might pass under them for some distance. This led to the question, whether these cartilages could be removed, if necessary. An examination satisfied me that the internal oblique and transversalis might be separated from their edges and internal face, and that the diaphragm might also be dissected sufficiently without cutting into the pericardium, pleura, or peritoneum.

On the 9th of March, 1837, the operation was performed in the following manner:—The patient being placed on a table, an incision, seven inches long, was made from the fourth rib downwards, and the anterior face of the tumour was exposed by dissecting away the integuments. Its face being laid bare, exhibited a bluish colour, and was of a scirrhous hardness. Every stroke of the knife around it, was followed by a copious flow of blood. When the circumference of the tumour was uncovered, its edges were found to be quite undefined, and concealed by the muscular connections. These being cut through, I was able to discover an ill-defined edge, and proceeded with the knife under this edge, and soon found I could detach the tumour from the faces of the cartilages; pursuing the dissection altogether by the touch, as the streams of blood and the hardness of the tumour prevented an inspection of the parts beneath, the operation proceeded favourably, till the tumour turned down over the cartilages into the epigastric region. Here it was obvious, that if it involved the internal oblique and transversalis to the extent it did the external oblique and rectus, the incisions would penetrate the cavity of the peritoneum, especially if this membrane adhered to the inner face of the tumour. Such was found to be the fact. The two inner muscles formed part of the disease; the peritoneum adhered to it for about an inch, and not having the advantage of ocular inspection, it was, of course, difficult by feeling to make a nice dissection of the adherent membrane. This was, however, accomplished, and the whole disease was removed in one mass. Four large arteries, and many smaller ones, required ligatures. The patient suffered much when the tumour was raised, from its drawing the pe-

ritoneum outwards. This part of the operation was short, and as soon as it was concluded, he ceased to suffer severely. The wound was closed, leaving an outlet for the sanguineous oozing.

The patient had a smart fever after the operation, and a slight degree of peritoneal inflammation, which was relieved by two or three bleedings. His symptoms afterwards were perfectly favourable, and the wound healed in the third week.

On examining the tumour, it presented a cartilaginous hardness. Its surface, on all sides, was composed of the muscles in which it lay. Its substance consisted of a brownish texture, in which a multitude of granulations, the sixteenth of an inch in size, presented, with intermixture of a fibrous arrangement. At one point there was a softening, as if suppuration were about to begin. At another, a dark red spot was seen. The internal or epigastric part was equally hard with the rest of the tumour. The surface of the cartilages was deeply depressed where the tumour had lain.

The obscurities of this case were not removed till after a careful examination of the tumour, and a consideration of the circumstances connected with it. The shining appearances of the external oblique muscle in a perfectly healthy state, though intimately connected with the tumour, showed that this was not the original seat of disease. The cartilages of the ribs were indented, but healthy. The internal oblique and transversalis were closely connected with the inner face, but quite apart from the tumour at its origin. The rectus muscle, on the other hand, was in the situation of the first prominence caused by the injury. The texture of this muscle was wholly absorbed in the tumour, and no vestiges of it remained. The tumour itself consisted of a mixture of granulated and fibrous organization, such as is seen in scirrhous tumours of various organs.

This chronic inflammation happens, most frequently, in parts disposed to inflame, as the cellular texture. Steotomatous tumours are caused in females in the cellular texture, on the upper part of the deltoid muscle, by the pressure of their dress, with a frequency which is notable. The greater number of tumours being formed without any such accidents, so far as we know, this, from chronic inflammation, if admitted to be a cause, is only a partial or occasional one.

On the whole, therefore, it must be understood, that we have but a very imperfect knowledge of the predisposing and exciting causes of these derangements of organization.

Diagnosis of Tumours.

Under the disadvantages, from a want of information on a number of important points, we are limited in our means of distinguishing the various tumours from each other, with a satisfactory degree of confidence. To accomplish our diagnosis, as far as practicable, we should begin the investigation with the acquirement of a history of the origin and progress of the tumour, its influence on the part where it is situated, and on the whole system. After having obtained this history, a physical examination should be conducted with great care, and if there be any obscurity in the case, should be repeated frequently, and under different circumstances. With the exception of steatomatous and simple glandular tumours, how few of these diseases appear, on dissection, as the imagination of the surgeon had depicted them? Such misconceptions do not prove either a want of attention or of skill. They prove only the uncertainties of the best studied investigations, and the necessity of bringing to our aid all the methods of elucidation which time, reflection, and care may furnish. Therefore, we should never advise nor undertake any decisive measure, at first view, in any but the plainest cases. To be called to operate on a chronic tumour at first sight, is an impropriety which no prudent surgeon should submit to.

The physical qualities of tumours, like those of other bodies, are primary and secondary. Each of these, as far as may be, should be successively studied. The *figure* is the quality which first strikes our senses, and should be well considered. Certain species of tumours affect particular forms; the steatoma, for example, is commonly rounded, and encysted tumours always have this form. Bony tumours and those of the complicated glands are irregular. *Extension* is an important quality, as it involves the connexion with surrounding parts. This is more difficult to understand, because we have access to a part only of the object inspected, the rest being concealed by organs attached to it. The extent of the part beyond the reach of the senses of touch and vision, is that which may implicate the most important structures, and cause the greatest embarrassment. The *solidity* will decide whether the tumour consists of bone, as an exostosis: or of bone and soft substance combined, as an osteo-sarcoma: or of fluid, as in the encysted tumour. Of the secondary qualities, that of *colour* has a great influence on our judgment in these cases. When the natural colour of the skin over a tumour is changed to red, our first impression leads to the suspicion of a malignant action, which may be confirmed or confuted by farther examination. If this change appeared in a chronic affection of the breast, the suspicion would, probably, be well founded; if on one in the back, the appearance would, most likely, prove to be accidental. We are, perhaps, ready to attribute too much importance to this quality, considering its va-

riableness, and the different lights in which it appears to different persons. A lady came to me from the country with a very tumid breast, the skin of which was of a bright red colour, giving it a formidable and very malignant aspect. On the following day the colour was less, and gradually diminished, till the part had the usual appearance of healthy skin, and the disease proved not to be malignant.

Besides these qualities, there are others which may be called accidental, such as *pulsation, vibration, undulation*. These may exist in the tumour itself, or in a part connected with it, and may indicate aneurysm, aneurysm by anastomosis, a fluid contained in a cyst; or the proximity of such diseases to the part inspected.

A mental comparison of the qualities of the object under examination, with those of other tumours, is a process which every one naturally institutes; of course, the greater the number and variety of these objects, the more full will be the investigation, and the more certain the decision.

ON PROSTITUTION IN THE CITY OF PARIS,

CONSIDERED UNDER THE HEADS OF PUBLIC HYGIENE, MORALS, AND INTERNAL POLICE.

De la Prostitution dans la Ville de Paris, Par A. J. B. PARENT-DUCHATELET, *Médecin de l'Hôpital de la Pitié, a Paris.* Bailliere, Paris. Two Vols., 8vo.

(Continued from page 163.*)*

THE work of M. DUCHATELET contains much important statistical matter which we have not yet given, want of space having prevented us from before continuing the analysis of its contents.

Regulations respecting houses of prostitution.—The police only "tolerates" houses of debauchery in Paris. It does not "authorize" them. At the same time it strives to diminish in every way the nuisance of those establishments, which have at all times existed, both in France and in other civilized countries, modified according to the climate, manners, and habits of the people amongst whom they have been found. After giving an account of the various titles of these houses among different nations, and in different times, M. DUCHATELET states that the administration of police in France calls them "maisons tolérées," which he thinks is, under the circumstances, the most wise and moral designation that can be given to them.

Principal conditions required in all such houses.—The police will not allow two proprietors in one house, having but one street entrance. They object to the closeness of the rivalry, which would generate riot. But one such house exists in Paris, and in that one the "elevated class of visitors," and the congenial dispositions of the two proprietors, tend to prevent the nuisance described. In all the houses they require that each woman should have a room to herself. This regulation has proved a very good one. It has assisted much to preserve good order. No house is allowed a back or concealed door, and no direct communication between it and the neighbouring houses is allowed. Nor is any closet, or article of furniture, permitted in any of them which is large enough to conceal a person in it. This prevents many grave events. Free space and ventilation are also required in them, and cleanliness in clothing and bedding, with one bed for each woman, is especially directed. Before these things were enforced the state of the haunts of prostitutes was dreadful to the contemplation. The mistresses are also compelled to supply the inmates with every essential article for the toilet. These regulations may not have changed the predominant character which prostitution tends to create, and the *penchant* for uncleanliness, but yet it has, by enforcing a *habit* which is contrary to that of debauchery, effected a great change for the better. Moreover, medical men say, that this compulsory cleanliness has done much towards diminishing the ravages of syphilitic disorders in Paris.

Shops dependant on these houses.—These are regarded as grave inconveniences in Paris. Women *will* abide in them, and cannot be prevented from there making known their objects. Many of the shops are smoking-*cafés*, and contain liquors for sale, which attract visitors. During the first revolution more than 20 of these shops were established in the Palais Royale, eight of them being in the ancient wooden galleries. They adopted, for signs, vases, containing particular colours, and flowers of the season, arranged in a peculiar way, which all the world understood. These places at length became shockingly indecent. Nothing but a shop, and a little back room, with a screen to divide the latter, constituted each place, and the "Reports" of the period were filled with accounts of the horrors committed in them, and no man, however little reserved he might be, could pass them unshocked. But they were soon repressed, and at present there are but few in Paris, and these require the greatest *surveillance*. The curtains which the police require in order to prevent the female inmates from being seen from the street, are made of so thin a tissue that the women can easily be espied through them. The police especially endeavour to repress these *estaminets* in the more sump-

tuous quarters of the city, or they would soon become there quite intolerable. In the lower districts they are occasionally tolerated, for, as they *will* exist, it is found that the moment the act of toleration is extended to a particular house, a degree of order prevails in it, and in the neighbourhood, which was before unknown, and as the authorities can enter it and repress it at any hour, without warning, the proprietor watches the proceedings within with great care.

Places near which these houses are not allowed.—These are, first, sacred edifices, of any creed; palaces; great public establishments; and the residences of high functionaries. Secondly, schools. Thirdly, furnished hotels. One hundred paces distance from either of these is required, when the women attached to them do not exhibit themselves in the streets; otherwise the distance must be more considerable. NAPOLEON, who felt a sort of horror of prostitution, caused all the houses in the neighbourhood of the Tuileries to be removed, and under the Restoration even women in isolated lodgings, of quite an unobtrusive character, were compelled to quit the district. These unfortunates, in distinct lodgings, a more decently behaving class of women, and in no way giving public umbrage to decency, NAPOLEON did not pursue with such rigour, though market-places, the houses of great dignitaries, and barrack and guard-rooms, were "privileged" to be quite free from the proximity of tolerated houses; but this (says M. DUCHATELET) was "an exaggeration, and displayed an ignorance of details which was pardonable in the chief of a state, as will hereafter be seen." As to schools and places of education, the distance of separation has not been fixed. The points of consideration, in this particular, are, whether the children are very young, or from ten to fifteen years of age, or reside there, or simply come for instruction; or the school-rooms are on the ground-floor, or in front, or in the rear of the house which is to be tolerated; or whether the bend of the street conceals the view of the school-establishment from the house. The commissaires d'employés decide on all these points. The *kind* of house to be tolerated is also weighed. "All the evils to be prevented, and the good to be done, is left to the sagacity and good intention of the chiefs and their subordinates." In general, fifty or sixty paces are directed. "Would it be possible to carry the care and precaution farther?" Great honour is, in fact, due to these functionaries for their care of the public welfare in all these respects. The prevention of these houses near furnished hotels is regulated, first, because foreigners, who do not well know the locality, will often mistake the door of the bad house for that of the hotel, if they be near to each other. Complaints are constantly being made of this, and the more strongly in proportion as the hotel has been more respectable. Foreigners, with families, have been known to quit an hotel the moment they discovered the character of their neighbours, and thus some hotels have been entirely ruined. Near to less respectable houses the bad houses are not "tolerated," because very often the frequenters of the latter have, in a state of intoxication, entered the good, furnished house, and there conducted themselves very ill. Others, in the middle of the night, have mistaken the bad house for the good one.

Proprietors of houses.—The police will not "tolerate" any house for the purposes of prostitution, without receiving the written consents of the proprietor and the principal tenant, whether a lease exists or not. Prostitutes, once located in a house, might dishonour its character for ever.* It is in vain to metamorphose it, to embellish it, to lower the rent. Nobody among the Bourgeoise will inhabit it. Years must pass first. One result of this state of things is, that houses once devoted to prostitution acquire a great value. After examining hundreds of their leases, the author says that their high rent has always astonished him.

Localities and streets.—The researches which M. Duchatelet made proved to him that some of these houses had possessed no other destination for more than a hundred years. Indeed, many streets in Paris were proved by M. Duchatelet to have been specially resorted to by prostitutes for the last six hundred years. An ordinance of A.D. 1419, which he discovered, relates that their residences existed in a particular place in the year 1230, and in that place they still continue.

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* The following remark is worthy of extraction, both as showing the industry exercised by M. Duchatelet, and the fact recorded. Speaking of these written consents, M. Duchatelet says:—"I have examined hundreds of certificates given by proprietors and principal tenants, and have kept note of the way in which they were drawn up, and I must say that, with a very few exceptions, they announce a total want of education, and the greatest ignorance, in the writers. The repugnance thus evidently felt by educated and delicate-minded men, to allow their houses to become haunts of vice and infamy, is highly gratifying to observers. With regard to the exceptions, they are those of men of the first rank and worldly dignity, but the names of these I must suppress, and keep concealed what else I know in this respect."

In streets which are narrow, little frequented, and not generally considered proper for the *maison tolerées*, they are not allowed. In thinly populated streets passers-by are liable to be insulted and plundered by the bullies, when the police are not at hand. In streets or courts which end in a wall, or have no thoroughfare, and which no one would attempt to enter with a view of abridging his road, the police never refuse to tolerate them, when asked. "The authorities, indeed, esteem themselves happy when they are able to conceal in these spots the haunts of vice which cause them such embarrassment, and they would be glad if similar corners existed in all parts of the town." To prevent rivalry, hatred, collision, and riot, the police object to *maisons tolerées* being very near to, or opposite to, each other, especially where the girls show themselves at the doors.

Respecting the accumulation of these houses in certain parts of the city, there is a difference of opinion between the commissaries of police and the administration. The former object to the accumulation; the other sees great advantage in it. It is disagreeable to the former to have to watch a great number of such houses, and preserve order among them, and carry on conversations with the refuse and filth of society. Therefore, their "reports" continually contain recommendations for a refusal of the toleration of many of them, where they are thick, even where the behaviour in the house is comparatively good. The commissaries wish the charge of these houses to be, by their more equal division in the city, more equally divided among the guardians of the public morals. Moreover, they say that prostitution is more offensive to the eye when thus accumulated. The administration replies, that the population in that neighbourhood being accustomed to the presence of the houses, do not mind them; that the evil being concentrated, is more easily watched; that the establishment of many centres, by the distribution of the houses, would increase the vice; that succour, on occasion of accidents, is more easily rendered there, and a less number of police is necessary. Their proximity, moreover, to the collections of the military should not be disturbed, because that locality is always the more orderly, through dread of military interference, and from that reason NAPOLEON was wrong in removing the one to a distance from the other. It is true that the morality of the soldiers may thus be somewhat affected, but the military posts (say the authorities) are organised for the benefit of the town, not for the advantage of the soldiers.

There is not a street, however filthy and disgusting it may be, or however badly it may be inhabited, in which the establishment of a public place of prostitution does not excite reclamations and protests on the part of all the tenants and landlords of the houses, who, when they cannot obtain the ear of the police, will even carry their addresses to the throne. "I have seen," says M. Duchatelet, "a letter addressed to the Duchess of ANGOULEME on the subject, from one coalition of these parties, and forwarded by the duchess to M. DELAVEAU. The answers of the administration to these expressions of griefs and opposition may be easily guessed. "Prostitution," say they, "is inherent in society, and cannot be destroyed. If an establishment of prostitutes be driven from any particular spot, it will, of necessity, locate itself elsewhere. In this new place of residence it will excite complaints not less just than those which arose in the first locality; and were these listened to, no such house could be established any where. All we can do," they add, "is to repress disorder in them."

Disorders in the houses.—These are rare, and only occur in the lowest houses. They are not of daily occurrence, but return periodically: thus, on a Saturday (pay day among their frequenters), scenes of disorder are the consequence of drunkenness, from refusals to pay; and, sometimes, bullies then seek for opportunities of quarrelling. Cries of "thieves!" murder!" "a l'assassin!" are heard there, but always uttered by the women, who are assaulted by men stronger than themselves, and by whom they are badly treated. Often, individuals, who have been infected in a particular house, return in force, and horribly maltreat the mistress and her women. Soldiers are at all times the terror of the *dames de maison*, and generally are the cause of the disorders which occur in them. But disorders there are really rare, and all of them occur in furnished lodgings, and in lodgings of isolated women. Formerly there were many murders committed there, and their frequenters constantly wore swords by their sides, to be ready for defence. "A worse state of things," says M. Duchatelet, "it is difficult to conceive. Let any persons accuse the administration of bad arrangements and immorality in their toleration of prostitutes. As for me, I everywhere behold the happy results of its tutelary actions; I admire the benefits for which we are indebted to it. I have already signalised some, and there are many others of still greater importance. This police, so much decried by those who do not know the good that it produces, is sometimes greatly embarrassed as to granting the toleration which is asked for some houses. For instance, certain cut-throat places seem to be chosen in preference, by the *mauvais su-*

jets, and the more abject of the prostitutes. Around these places, the wine shops, tobacco shops, and estaminets, swarm, which only prosper by the expenditure which this unclean population there makes. In vain has every means been employed to purify these streets, and drive away the women. The measures only injure the principle and more decent tenants, and serve to convince the author, that these spots cannot be disinfected." In such a case, when liberty is asked to establish a *maison tolerée*, the police hasten to grant it, without paying attention to the schools of boys or girls which may be near it. Sometimes persons of the worst characters ask for this authorization. Did they petition for it for any other locality it would be refused; but in the case in question it is immediately accorded. In concentrating at this house all the bad characters, great facility of watching its frequenters is obtained. The keeper of the house, in fact, himself becomes, in some instances, an agent of police, by the *surveillance* which he exercises over its inmates, and from the fear of seeing his house shut up, does more himself than a great number of inspectors could do.

Proposals to locate tolerated houses on a new plan.—The injury done to particular neighbourhoods by these houses has led to many proposals for reducing the evil. One of these came from RESTIF DE LA BRETONNE. He proposed to establish different classes of women, according to their beauty and accomplishments; he drew up a tariff of prices, and organized an internal administration of the establishment in which they should be collected. He provided for married women, pregnant women, their children, the invalids, and the superannuated. He did not forget the *chaplain* of the house, and took equal care about the appropriation of the revenues. This work, says M. Duchatelet, was the fruit of a learned mind in delirium, its author not understanding the manners, inclinations, and habits of the prostitutes. His project was impracticable, but the honourable design was attached to it of amending the health of the women, and ultimately destroying syphilis. Forty years after this proposal was made, plans for effecting this latter scheme were put into execution, and we shall see, in the end, the marvellous fruit it has produced. M. Duchatelet mentions many other proposals on the subject, which were made to the government. Among them was one which suggested the establishment in each of the arondissements of Paris, of six houses of prostitutes, which the author proposed to call "Vauxhalls of Cythera;" and in the concluding rule for their internal government, he endeavoured to show that no one was better qualified than *himself* to be their inspector-general. The last memoir received on the subject was presented, in 1829, by a Monsieur D. Nothing can be more immoral than that memoir, though drawn up with much talent, and being, at the same time, modest and decent compared with that of RESTIF. Monsieur D. stated in his paper that marriage, and the legitimate satisfaction of the desire to reproduce, do not suit all the world,—that the real sum of the wants of the population, in this respect, must be calculated,—that his project was based upon such calculations,—that the occupation of prostitutes had hitherto been conducted in a most deplorable manner,—that the administration should neglect nothing to induce the public to frequent the houses now proposed to be established,—that his project was most moral, and, indeed, that the inscription on the houses should be simply, "Morale,"—that hitherto the most ignorant creatures had seized, with the utmost meanness of conception and rapacity, on the destinies of women of the town, and had thus rendered the latter as ignoble as possible; and, finally, that the "spirit of association" is alone able to ameliorate the condition of these women, and of granting them what society ought never to have refused them, viz. an existence which is compatible with morality, and its conditions in life. The Company which was to have these new establishments was to be indemnified for the millions of francs which it was to expend on them, by granting to it an exclusive privilege of prostitution, and the administration was, first of all, to close all existing "tolerated houses," as a scandal. This proposal was rejected, less, perhaps, from the impossibility of executing the project, than from the disgust with which the way of treating such a state of things (which, though inevitable, is not the less painful) inspired the administration, and because it was right to leave to vile beings, vile speculations; moreover, having *millions* of money at the disposal of an executive power, would not prevent the prostitutes from being placed in the catalogue of individuals who are reputed infamous by all nations.

Maisons de passe (*accommodation*).—Perhaps all the houses in Paris fall under this denomination, but some are devoted exclusively to letting out, for short periods, chambers, more or less sumptuously furnished, and in the latter at least two prostitutes are always inhabitants, but there would be none if the police did not require it. They are chiefly resorted to by women who have no homes but at night, and those little better than mere holes, and who bring to them men whom they have picked up in the streets, and in the various places which they penetrate. The majority of the prostitutes possess so much more liberty under this condition than under the *dames de mai-*

son, that they prefer it to living in the tolerated houses; moreover, all that they gain belongs to them, and they receive only whom they like, and can go anywhere. These houses, it is found, do much harm in this respect, that they offer "a convenient resource to the domestic servants of Paris, who, while doing their errands, and attending, in appearance, to the interests of their masters, know how to take half an hour for themselves, of the time which is given to them, and at the same time preserve their reputation, which is so important to their interests." Workwomen, who have finished their day's employment, visit them, in some sort of disguise, and married women are not afraid of visiting them; and men often bring there young girls, whom they have decoyed by promises; indeed, it is not rare to find little girls of twelve, thirteen, and fourteen years of age, who know these houses, and conduct to them men whom they have found in public. Some of these houses are specially devoted to second-rate actresses from the theatres, who are so numerous in Paris. The police watch these houses as the most dangerous of all, and their directresses sometimes conceal themselves so effectually, that their neighbours cannot detect their persons. One of them, indeed, was so clever at this mystery, that her two sons-in-law, very honourable men, only learned after her death the impure source from whence proceeded the 50,000 francs that each of their wives brought them as a dowry, and the similar sums which they obtained at her decease.

The police, thinking to effect some good, at one time entertained the idea of compelling the directresses to send to the prefecture every day a descriptive list of all the women who had visited them during the last twenty-four hours. It was hoped by this means to surprise a number of *incognitos*, and subject them to the sanitary *surveillance* of the police, and inspire, respecting this sort of house, a salutary fear in all the females, who, preserving some sense of shame, would not like their names and habits to be thus divulged. But the plan was found to be impracticable. How could women attend to such a duty when the majority of them could not write legibly, and might thus compromise, by errors, the characters of many reputable people. What sincerity, also, was to be expected in the lists? What mattered it to them if they added the infamy of a lie to those crimes in which they were already involved? Moreover, they would lose their clients, and what work would it be at the prefecture to examine and verify every day one hundred and fifty or two hundred lists, each containing ten, twenty, and in some cases (for it must be owned) more than eighty names; and all this labour only to discover some unknowns, who would easily elude inquiry by not giving their real address. The idea, also, of demanding of all *dames de maison* that they should refuse to admit these passing visitors, was abandoned, because such persons would only meet in yet worse houses, and although the present plan is sad indeed, it is tolerated to avoid a worse. Moreover, such women cannot be assimilated with the class of "prostitutes," and they cannot either be reproved as the authors of *public* scandal, or hindered from doing what they think proper, so far. "In this respect," adds M. Duchatelet, "as regards prostitutes, we must learn how to tolerate what cannot be prevented, and it must be owned that the *dames de maison* are, thus, of some utility, and we must be content with simply watching them, to prevent their bad disposition, the baseness of their souls, and the perversity of their habits, from urging them to overstep, too far, the bounds of public morality." To effect this object the administration has hitherto only found one means, that is, to require that in all the houses which are devoted especially to this avocation, there should permanently reside in each, two registered women of the town. In fact, experience has proved that the simple presence of these two women keeps in awe the directresses of the houses, who consider them as so many police spies, who would make known when persons of an improper age, for instance, attended the house, and thus render necessary the visits of the dispensary surgeons, and justify the entrance of the police inspectors at any hour of the day or night. Of one hundred and fifty houses that were known in 1823, and which only contained two hundred and twenty prostitutes, forty-eight had not a single registered prostitute in them. This state of things was denounced to the prefecture of the police as being equally pernicious to the interests of society and to public morals.

Maisons à parties.—Some *dames de maisons*, not without education, good manners, and much capacity for intrigue, give breakfasts and dinners, where monied debauchees assemble, to find the more agreeable of the prostitutes. These are dangerous women, whom the police cannot consider as prostitutes, although they exercise their trade. At these parties, often made up in the country and retired places, enormous sums are lost and won. Thieves are always in connexion with these women at the parties. Some of these houses are kept most expensively, by women whom the police cannot get at, and preserve the appearance of the utmost modesty and respectability. "In these houses intrigues and rendezvous are arranged, and women who have been abandoned by their husbands are to be found, or other Messalinas come to share in orgies of the most phrenzied debauchery, and there

are discussed and sold the means of procuring to a man the women whom he may long for, but whom he cannot otherwise get at." The police cannot easily control these houses, and searches in them generally lead to nothing.

Should prostitutes be banished from particular places?—Experience has demonstrated that the evils of clandestine prostitution are such, that it would be most unwise to canton the prostitutes in particular localities, and thus rid other places of them. Moreover, who would at night, or even in open day, like to visit those streets? and what injury of character would not those persons suffer who were seen to come out from them, pursued by the hootings which used to assail those who issued from the streets Grand, Petit, and Moyen-Hurleur, where they had once succeeded in locating the prostitutes of Paris? "Prostitution, as I have already many times said," observes M. Duchatelet, "is like a torrent that cannot be stopped, but may, to a certain point, be directed, and always tends to find its level with the habits and wants of the population. There are places which repulse it; others which attract it. We may seek in vain to remove it from the latter and drive it to the former, but an irresistible force will spoil all the measures of the most indefatigable *surveillance*. None, indeed, but the superficial will engage in the vain attempt to wholly abolish this vice."

NAVAL MEDICAL OFFICERS.

The following remarks were made by Sir Edward Codrington in the course of his speech on the Navy Estimates in the House of Commons, on the 7th of April last, a printed copy of which we have recently received:—

"The next class to which I come is the Surgeons. I have, on a former occasion, adverted to the little encouragement given to this important class of the Naval service, and, therefore, merely referring Hon. Members to the amount of their pay, as stated in the estimates before them, I will call their attention to a simple statement of the injustice done to this class as compared with the same class in the Army.

"*Assistant-Surgeons* of the Army have more Half-pay after 25 years service than *Surgeons* of the Navy after 29 years and 11 months.

"Since 1815, a hundred Medical Officers of the Army have been promoted to ranks higher than Regimental Surgeons, entitling them to higher Half-pay, while only one Surgeon of the Navy has, in that long time, been promoted to any higher rank giving him an increase of Half-pay.

"The whole time of Assistant-Surgeons in the Army is permitted to be reckoned, while only three years are allowed to be reckoned by Assistant-Surgeons of the Navy, however long they may serve; and although the Army-Assistant gets 7s. a-day after 25 years' service, the Navy-Assistant, if he serve 50 years, can only have 3s. a-day.

"As an instance of the severity to which Naval Surgeons are further subjected, I must take leave to cite a case which I have before mentioned to this House, and which did not then seem to attract the notice to which I think it entitled. In 1818, Mr. Beverley was appointed Assistant-Surgeon to the *Isabella*, commanded by Captain Ross, and went in her on the Polar Expedition. On their return he was appointed to the *Griper*, Lieut. Lidden, and went the Melville-Island voyage with Captain Parry, acting as Surgeon. On their return he was confirmed as Surgeon. He declined the proposal of going a third time, on account of his being married, and being established in practice by Mr. Abernethy. He was then (consequently) ordered to the Coast of Africa, and upon his refusal to go he was scratched off the list, and deprived of his Half-pay. Upon being offered to be reinstated as a condition of that concession, he went, for the third time, on the Spitzbergen voyage, with Captain Parry. On his return, being then reinstated, he was again ordered to the Coast of Africa; and upon his declining to sail, on account of ill health, being at the time afflicted with ophthalmia, a disease which was likely to be increased by that climate, he was again scratched off the list of Surgeons, and deprived of his hard-earned stipend. Now, compare this with the irregular promotion of the Surgeon who lately accompanied Captain Ross on one such Polar Expedition, without having ever served in the Navy."

HERNIA OF THE PERICARDIUM.

The above condition of the pericardium presented itself in an aged female subject, with general anasarca, brought into the Park-street School for dissection during the present session, of whose history I have not been able to obtain any information. The pleural cavity on either side was found completely obliterated by old and extensive adhesions. The anterior mediastinum was occupied by a membranous pyriform sac of considerable size, lying on and overlapping the pericardium, which was greatly distended, as well from the large quantity of fluid it contained, as from the hypertrophied condition of the heart, which organ was in a state of active aneurysm. The sac contained

three or four ounces of fluid, and was free in its whole extent, except at its upper and smaller extremity, where there existed a free communication between it and the pericardium, as was proved by raising the sac off the pericardium, when it was made to empty itself, the fluid passing into, and increasing the already distended condition of, that sac; and again, on pressing on the pericardium from below upwards, the abnormal sac, in its turn, assumed its former dilated appearance. The communication of the pericardium with the abnormal sac was next brought into view: it was situated immediately at the point of reflection of the pericardium on the aorta, in one of those pouches which are designated the sinuses of Haller, and presented a regular, well-defined, circular orifice, freely admitting the introduction of a finger, around which the fibrous membrane of the pericardium formed a thick annulus of great strength, and then passed, considerably attenuated however, over the whole surface of the sac. The serous membrane passed into, and lined it throughout. The preparation of this very interesting case is now in the Park-street Museum. The only analogous case that I find, is one mentioned by Boyer. It occurred in the practice of Dessault, and was mistaken for, and operated on by him for, hydropericardium. He gave exit to five or six ounces of serum, but without affording relief to the patient, who died next day. On opening the body, the pericardium was found to be untouched, and the pouch which had been mistaken for this sac, and punctured, was formed by a membrane which united the anterior edge of the lung to the pericardium. Although in both these cases the membranous sac contained fluid, yet there is no mention in Boyer's case of any means of communication with the pericardium, which constitutes a material difference.—*Mr. T. Hart, in the Dublin Journal, July.*

NOTE FROM MR. BREE.—*To the Editor.*—SIR:—As the communication of Mr. Bedingfield, inserted in THE LANCET of the 5th inst., is almost entirely occupied with matters of a personal nature, or of mere inuendo, I must be excused if I decline continuing a correspondence in which your readers can have no interest, and from which, with the weapons used by Mr. Bedingfield, nothing satisfactory can result. I shall only observe that the charges of corruption and bribery in the case of Francis, of gross misrepresentation on the part of Dr. Ray, and of my having forfeited my word in a positive engagement, are each and all without any foundation in truth, or any thing else except imagination, and if any one will summon Mr. Bedingfield before a Committee of the House of Commons, I am quite ready to meet him at that or any other tribunal.

C. R. BREE.

THE LANCET.

London, Saturday, August 19, 1837.

A MAJORITY of the profession will not be surprised when they are informed, that no answer has been received by us, either from the Council, the Secretaries, or any of the members, of the PROVINCIAL MEDICAL ASSOCIATION, in reply to the questions which were proposed to them in the last Number of THE LANCET. The silence of the promoters of the "great designs" of the Society, is eloquently expressive of their intentions. Although they might find it, on most *other* occasions, to be very congenial with their feelings to state, with perfect candour, what are their views on the generality of professional subjects, yet it is exceedingly inconvenient to make a bold declaration of motives on *this* occasion. If the Secretary,—who, albeit, is also the *founder* of the Society,—had not himself alluded to the "GREAT DESIGNS" of the Association, we might have been ignorant that any such designs existed; but when he states that they *do exist*, certainly it is not unreasonable to request that we may be informed of what they really consist.

But what must be the nature, we would ask, of those "designs," which their authors *dare not define?* Every member of the Association who is gifted with common sense, and is not, withal, a DUB, must, by this time, be convinced that he has been cajoled by its promoters, and that he belongs to a Society between the chief actors of which and himself there exists *no real community of interests.* Whatever may have been the intentions of its *promoters* when this Institution was in its infancy, the professional public distinctly believed that the Association was projected *for the purpose of promoting the great work of medical reform.* It was that belief, and the support which the Society accordingly received from the press, that induced eight-tenths of the members

to enrol their names on the list of Associates. Their credulity, however, has now been fully tested, and had not the ricketty and tottering Societies,—parent and branches,—leaned towards one another for support, little else than the *name* of the Association would now be in existence. The artificial assistance which the Societies have just acquired by lending themselves to each other reciprocally as PROPS, is a sure prelude to the complete fall-down of the entire fabric. Regarded in any light its fate is sealed. As an Association of *general practitioners of medicine*, its failure *is, already*, signal and perfect. As a Society, which is led by a few designing *dubs*, it cannot much longer exist, for a knowledge of the views of its conductors must be fatal to its permanence.

The existence of Associations of this description, or, in fact, of *any* kind, except for convivial purposes, is itself a sufficient proof of a diseased state of medical law and government. If the profession elected their own rulers,—if there existed a great medical corporation in which the voice of the profession was heard and obeyed,—if the powers of that Corporation permitted no other system of government to prevail than one wherein national, and not individual, interests were regarded, of what use, we would ask, would be a migratory Association, or a Medical Association of any sort, unless it existed simply to protect local interests, or to cherish a kindly and liberal feeling among the practitioners of some particular neighbourhood? The vices of exclusive Corporations always tend to produce combinations amongst the parties whom they aggrieve; but then the grievances are not *concealed*, a statement of them is not *withheld*, except, indeed, in the novel mode of seeking redress which is adopted by the provincial migratory associators. Really, the case of this Society presents no parallel. The members are all of them discontented; even the leading DUBS among them complain of the "system;" they say, in their speeches, that "the system" is *bad*, and yet it is declared, that the individuals who work that system, are *worthy of unmixed respect and esteem*. Yes; such is the language of Dr. BARLOW in his after-dinner oration:—"For those learned men who preside over "the medical institutions of the country, I "feel *unmixed respect and esteem*; the fault "is not in them, but in *the system*; those "gentlemen, individually, have *always* acted "according to the dictates of *their soundest* "*judgment*."

This, by-the-by, from Dr. BARLOW! Did the speaker always entertain these opinions? Is he envious of the notoriety of the apostate LAWRENCE? "The fault," he says, "is not in the men, but in the system." We agree with him that the system is defective. Often have *we* stated that it is *infamous*. But are the men who have acted in it and under it,—who have striven, night and day, to *maintain* it, in *defiance* of the wants of society, the rights of their professional brethren, and the demands of science,—are such men entitled to "unmixed "respect and esteem?" Really, Dr. BARLOW, this is too bad. You know perfectly well that had it not been for the proceedings of those very men, *the system* would, long since, have been destroyed. And although you state that they "have always acted, "*individually*, according to the dictates of "their soundest judgment," you must know, as well as we do, that the acts of a *corporation* comprise the acts of *individuals*; and that those acts have been of an infamous character, is felt and acknowledged by the whole of the profession. Such declarations of sentiment, coming from Dr. BARLOW, are less creditable to him, because he has *paid attention* to the subject of collegiate misgovernment, few men in this kingdom being better acquainted with the disgraceful practices of our medical corporations, and of the individuals who compose those corporations. But notwithstanding the fulsome compliments which he bestowed upon "the learned men who preside over "the medical institutions of the country," and the censure which he directs against *t*

system, it is curious that the doctor did not say what were actually its *points of defect*. He left his hearers to indulge, to their hearts' content, in conjectures on that subject. But it may be said, perhaps, that the *remedy* which the doctor proposed, or supported, would be, of itself, a sufficient index to his opinions. Ah, but the doctor *proposed* no remedy. He *supported* none. Here, also, had his auditors, and again have our readers, to fall back upon their stock of conjectural reforming expedients. Was this a fair mode of treating the members of the Association, or the profession? A declaration of Dr. BARLOW'S *former* opinions on this subject would be instructive and refreshing. The repast could be furnished to our readers without difficulty.

Turn we, now, from the language of Dr. BARLOW, at the late meeting, to that of Dr. HASTINGS, the "great and immortal founder" of the "great Association" which is pregnant with so many "great designs;" and, in doing so, we must recall the attention of our readers to the manner in which medical interests have been treated in Parliament within the last seven or eight years.

A demand was made by the profession, some time since, for an Act of the legislature which should render legal the practice of dissecting the human body in our schools of medicine, prevent the odious and disgraceful exhumation of the dead, and place the teachers in possession of the necessary means of imparting instruction in anatomy, without giving offence to the kindly and natural feelings of the great masses of the community. This matter was taken in hand, in the House of Commons, by Mr. WARBURTON, assisted by Mr. HUME, and others, who struggled nobly with the difficulties of the task, and succeeded in procuring the ANATOMY ACT, although, in proceeding in his work, Mr. WARBURTON well nigh became an object of public fury, as there existed men base and malignant enough to attribute to him, in his proceedings, the worst of motives, and to endeavour to cause it to be believed that he wished to pass a law which could only inflict injury on the poorer members of society. That the Act is defective in many particulars, is certain, but it was the best of the kind that could then be obtained. The members of the profession were successful in obtaining *that* Bill.

A few years afterwards Mr. WARBURTON moved for the appointment of a Select Committee to inquire into the state of MEDICAL GOVERNMENT, PRACTICE, and EDUCATION in this country. The motion was carried, and the Committee sat during many months, Mr. WARBURTON acting throughout as Chairman. An immense body of evidence was received, and a large portion of it was printed and published, the whole being conducted with great labour to Mr. WARBURTON, and at a considerable expense to the public funds. This proceeding, as well as the passing of the Anatomy Bill, was undertaken in consequence of the exposure of medical abuses by the press, and the petitions of the profession.

Last year a Bill was introduced into Parliament, in which provision was made for THE PAYMENT OF MEDICAL WITNESSES AT CORONERS' INQUESTS. That Bill, having a special relation to medical interests, passed into a law, and is now in force. One of the clauses of the Bill consisted in requiring the *churchwardens* and *overseers* of parishes to pay the medical witnesses on the production of an order from the coroner. This practice, however, was found to be inconvenient to medical men. Accordingly, another Bill received the Royal Assent, on the 15th of last month (July), in which the coroner himself is required, "immediately after the "termination of the proceedings at any in-"quest, to advance and pay such remunera-"tion, or fee, to every medical witness "summoned under the provisions of the said "Act,"—the Act of last year. This alteration, so important and convenient to medical practitioners, and rendered so necessary by the alteration which the Lords made in the Medical Witnesses' Bill, was introduced into the new measure, and carried through both Houses of Parliament without creating

the slightest opposition. *This*, again, for *the special benefit and accommodation of medical practitioners.*

Now, when, we would ask, has it occurred that the interests of any body of men have received within so short a space of time more attention and protection from the legislature? All that has been demanded has been granted, and with respect to the fees at inquests, but few persons expected that a fee of two guineas would be allowed; and yet in all cases when a post-mortem examination has been performed, the sum of *two guineas* may be claimed, and the coroner is bound to pay the money *at the conclusion of the proceedings*, without subjecting the medical practitioner to the annoyance of making an application for his legal dues to the churchwardens and overseers of a parish which may be situated at a distance of many miles from his own place of residence. When have the interests of any profession received more attention from the legislature than was shown in these instances? Yet what says Dr. HASTINGS? We copy the following extract from the official report of his speech:—

"It unfortunately happens that there is no presiding influence in the great corporate bodies of our profession; I do not say this with the intention of casting any imputation on those great and learned men at the head of those Institutions, for the fault is in the system; but our medical corporations do not answer to the spirit of the time, and this being the case this Association has the greater responsibility. *The medical profession has* NO REPRESENTATIVES *to carry forward those* IMPROVEMENTS *which the times require; and being* UNREPRESENTED our interests have excited but *little sympathy* in that national council which ought to know that on us and our exertions the public health depends. When either of the other learned professions has cause of complaint, members are to be found in both Houses of Parliament who jump up to defend their claims, instead of which when a question is brought forward vitally affecting the care of the sick, some members of our wise legislature have been known to raise a sneer, and give not to the important question the slightest consideration."

It would be difficult to condemn this language in the terms by which it ought to be characterised. "The medical profession has NO REPRESENTATIVES!" And the man who dares to make that statement in the face of all that has been done for the profession, within a very few years, by Mr. WARBURTON, and other members of Parliament, is himself *silent* on the subject of the special interests and things which he would have "represented!" In his own Association *not one reform has been suggested*, and yet this man has the audacity to charge the members of the British legislature, one and all, with carrying forward none of those "improvements which the times require,"—with feeling "but little sympathy *in our interests*,"—with failing to defend the claims of the medical profession, and with other such gratuitous and falsely assumed culpabilities and deficiencies. "GREAT DESIGNS," it is true, are stated to be in embryo in the nest of the migratory birds who lately, in scanty numbers, assembled at Cheltenham, but no one distinct special amendment of the existing medical law, or the prevailing system of medical government, has been proposed by them. There is but "little sympathy" felt for medical men in Parliament! Oh! Dr. HASTINGS, you are deceived. There is a determination in the legislature to *protect* medical interests, and to advance the cause of medical reform. You are, indeed, greatly mistaken. The profession has many faithful friends and efficient representatives in both Houses of Parliament. The *majority* of the profession are thus circumstanced, but, alas, for the DUBS! *they* have "no representatives," "no friends," in the councils of the nation.

In the part of the speech which we have just quoted, it will be observed that Dr. HASTINGS says that the medical profession has "no representatives to carry forward "those improvements which the times re-"quire."—"IMPROVEMENTS?" Another

word, of course, for "GREAT DESIGNS." Well, then, *improvements* if you will.—Of what do they consist? What is to be *improved*. Here, again, we are left to plunge into the ocean of conjecture, to extract a meaning from the word; but what are we to think of a doctor whose medical Association is of the age of *five* years, and who, not *daring* to submit to his own Association his plan for the *improvement* of the profession, yet offers an insult to that legislature which within the last year has granted more than the profession has demanded, and declares that it contains *no representatives of medical interests*?

Not one member of the legislatorial body, be it also recollected, has ever received any suggestions from the founder of the MIGRATORIES, for the exercise of his influence and powers for the *improvement* of medical law or government! And, moreover, the moment chosen for offering this insult to Mr. WARBURTON and both Houses of Parliament, was the very time that was also selected for toasting our basely corrupt Colleges! Ah! Dr. HASTINGS, you are a medical reformer of the first water. Cannot you now help us to an exposition of your "GREAT DESIGNS" as an Associate Fellow of the Migratory Club? Having urged you on pretty briskly to a performance of your task as well as your duty, we take leave of the subject for the present, by conveying to you the agreeable piece of intelligence, that it is not in the power of either yourself, or any one of the CONOLLIES and the FORBESES with whom you are associated, or all of you combined, to inflict, by means of your Association, the slightest injury on your professional brethren, or to retard by one day, or even one hour, the full completion of national medical reform.

Recherches Microscopiques sur la Nature des Mucus, &c. Par M. DONNE. Paris, 1837. 8vo. pp. 70.

SOME time ago we noticed, with commendations, the recently published works of M. Donné, who, in calling to his aid the valuable lights which are afforded to the pathologist by chemistry and natural philosophy, has been enabled to elucidate, in an important manner, several very obscure phenomena in the walks of medical science. M. Donné has just added to his previous contributions another very valuable publication, under the title above quoted, and we hasten to present to our readers a brief notice of its contents.

His new Researches have been made on the mucous and other genito-urinary discharges of both sexes.

M. Donné, on examination, found the pus of urethral blennorhagy to be alkaline, in both sexes, and formed of globules, similar to those which are contained in other species of pus; and that this discharge, by the addition of ammonia, becomes, likewise, viscous and thready.

The pus of chancres of the glans penis, and of the vulva, he has likewise found to be alkaline; the globules were not so well defined, and the discharge *always contained vibrions*. It is remarkable that these animalcules are not found either in the sebaceous secretion of the prepuce, or in the pus of a blister applied to the glans in a non-syphilitic subject; nor in that of buboes, or that of venereal ulcers situated in other parts of the body; nor were they met with in fœtid pus which had been changed by the influence of the atmospherical air; whilst they were found to exist in the discharge proceeding from chancres situated in the vulva.

What part do these animalcules perform in the production of chancre? This question is the only one which ought to be raised. To resolve this question, M. Donné inoculated with the pus of *a chancre* which was rich in *vibrions*, the *thigh* of the same person from whom the matter was taken, and on the next day a pustle was formed, which was very serous, and contained abundance of animalcules.

The same experiment was repeated with pus in which the *vibrions* had been killed by the addition of a solution of vinegar in water; and in two cases out of three neither pustule nor ulceration was formed. Are we to attribute this nullity of action to the death of these animalcules? Undoubtedly these experiments are not sufficient to settle the question, but they pave the way for new inquiries in the same direction.

Vaginal discharges furnished to M. Donné interesting materials for remarks. Pure mucus of the vagina, he says, is always acid, and contains oval-shaped bodies, which are very minute. The acidity of this mucus is greatly increased by inflammation, and M. Donné, from some trials with it, is led to believe that in its nature it is acetic. The appearance of pus in the mucus of the vagina discloses itself by the existence of globules which are characteristic of that discharge. We are all aware of the difficulty of distinguishing the purulent from the mucous discharges of the vagina. By aid of the microscope, or even of a simple lens, we are enabled, in a great measure, to solve this question; though the inquiry is attended with some difficulty, and has not been verified as we could wish; at the same time we may remark, that in other descriptions of mucus, and particularly in nasal mucus, the globules appear as soon as the mucus loses its transparency.

When the discharge is muco-purulent, M. Donné was enabled to discover in it the infusory animalcule, called *trico-monas vaginalis*. The form is very simple; it consists of a globular body, which is perfectly distinct, and a filiform appendix, simple, and sometimes bifurcated, situated at its anterior extremity, and endowed with abrupt and rapid movements. Latterly, at the base of the appendix, animated hairs (*cils animés*) were found, which displayed a rapid rotatory motion, and which are described, according to M. Donné, as performing the office of chops, or jaws.

M. Donné, at all times, admits, with reserve, that these animalcules are characteristic of syphilitic vaginal blennorhagy. The co-existence of any of the ulcerations of the neck of the uterus, with *purulent ruginite*, sufficed to exclude the *trico-monas* from the discharge. It is, then, the mixture of the uterine mucus which always gives an alkaline re-action, destroys those animalcules which exist, and hinders an ulterior production from occurring.

The difference of re-action of the uterine and vaginal mucus upon vegetable colours, may, therefore, offer a very useful means for determining the source of the discharge, without having recourse to the process of touching.

M. Donné concludes this section of his undertaking by promising to supply us with a work on the influence which the humours, or discharges, above-mentioned, exercise upon the *zoospermes*, and the causes of sterility in females. These researches have already received publicity in a thesis which he maintained some time ago, upon Impotence and Sterility, and we earnestly desire the appearance of this original work.

From the rapid sketch of the labours of M. Donné, which we have thus furnished, our readers will understand the value of his exertions, which we regard as a happy commencement of important inquiries, in a heretofore unexplored region of pathology. We are vexed, on the arrival of every new work on animal chemistry from the pens of our continental brethren, to think how few effective labourers we possess at home in the field of animal chemistry, which, at some future day, will have accomplished wonders in pathology, as well as in physiology and therapeutics. To the name of Dr. Clanny, of Sunderland, an able labourer in the field, we can scarcely add that of any other English physician who is at present prosecuting this department of medical science.

ARREST OF UTERINE HÆMORRHAGE BY COMPRESSION OF THE AORTA.

To the Editor of THE LANCET.

SIR:—My attention has been directed to an article in the last number of your Journal, in which compression of the abdominal aorta is recommended to the profession as a novel remedy in cases of uterine hæmorrhage.

Nearly two years ago, Sir, I transmitted to the "Medical Gazette," an account of the improvements in midwifery effected by M. Baudelocque, of Paris, and amongst them was this very practice. M. Baudelocque has for some years instructed his pupils in the manner of compressing the aorta, and I can assure any of your readers who are inclined to try the experiment, that they will experience no difficulty whatever in arresting the flow of the blood to the pelvic viscera and inferior extremities. The process of M. Baudelocque differs, in some respects, from that described in the article to which I allude. He directs it to be performed thus:—Put the patient on her back, press the fingers of the right-hand on a table, or some other even surface, so as to destroy the inequality of pressure which would result from the different lengths of the fingers; place them, thus arranged, about an inch above the umbilicus, and, by gradually ex-

erting compression, the intestines will yield, to the right and left, and the vessel will be felt, pulsating, a little on the left side of the vertebral column. If the fingers of the left-hand be now applied to the femoral arteries, all pulsation will be found to have ceased.

This compression is perfectly easy, even in robust or corpulent subjects. I have myself done it repeatedly. It is equally applicable to cases of hæmorrhage arising from injury of the arteries of the leg, or thigh, as to bleeding from the uterus. In the latter case M. Baudelocque directs the secale cornutum to be given at short intervals until the uterus contracts. He has also invented a spring bandage for effecting long-continued pressure when necessary. I remain, Sir, your obedient servant,

JOHN CHAS. COOKE, Surgeon.

Coventry, Aug. 8, 1837.

*** Our correspondent is quite correct in his objection to the term "novel treatment." The designation was prefixed in the work from which the article was taken, and was inadvertently retained in the English extract. We believe that the cessation of the hæmorrhage, in the case in question, was owing to the contraction of the uterus, and not in consequence of the pressure which was applied to the aorta.

By the by, when our correspondent formerly wrote on the subject, he might have mentioned something more than M. Baudelocque's experiments. The fact is, that this method was known long before M. Baudelocque introduced it into France. The first proposal of the kind was made, we believe, in 1797, when a writer in "Loder's Journal" spoke of passing up the hand into the uterus, and then compressing the abdominal aorta through the parietes of that organ. This manœuvre was practised several times in Germany and in England, up to the year 1823, when Ulsamer, of Würzburg, suggested the possibility of compressing the aorta through the abdominal parietes, an operation which he performed with the best effects, in 1825, for the first time. M. Baudelocque's paper on this subject was published in 1834, and he therein assures us that his first idea of using external compression was entertained in the year 1828.

BLEEDING IN THE

COLD STAGE OF INTERMITTENT FEVER.

To the Editor of THE LANCET.

SIR:—Having considered and investigated the subject of bleeding in the cold stage of intermittent fever, and having observed the manner in which it has been received by the medical profession in general; and having, also, had an opportunity within the last few months of treating some cases according to that mode, I think it a duty to the public to give some account of the successful results which I have invariably seen to follow its adoption. Although having been taught by my highly-valued friend, Dr. Mackintosh, of Edinburgh, to bleed in the cold stage, a doubt prevailed in my mind that this treatment was not altogether safe, nor adequate to cure so severe a disease, consequently I generally pursued the old system, of giving bark, wine, and the usual remedies directed in books of former days. I always found the cure to be tedious, and, in some respects, not such as I was led to expect; I therefore was induced to try bleeding in the cold stage, and, with your permission, will relate, briefly, a marked case which came under my care.

J. B., aged 30, a labourer, of steady, sober, habits, was affected with shiverings, which generally came on at about 5, P.M., lasting for three hours, followed by high fever for four or five hours; the patient then broke into a profuse perspiration, which terminates the paroxysm; he has had two previous attacks, and was (from his own account) each time given bark, quinine, &c. The disease lasted six weeks, and left him, each time, in a very debilitated state. He applied to me on the 1st of May, when all his former symptoms re-appeared. I first saw him in the interim between the fits. I gave him a simple dose of sulph. magnes., and attended at his house when he expected that the cold fit would come on. I entered the house at half-past 5, P.M.; the fit was then so severe that I could distinctly hear his teeth chattering. Having been previously informed of the difficulty and slowness of the cure of his former attacks, I determined to put Dr. Mackintosh's mode of treatment at once to the test, and accordingly immediately bled the man to ℥xvi., and ordered him to take frequent small doses of sulph. magnes. and tart. antimon.

May 2. Felt much relieved. At the usual time the cold fit returned, though not near so severely. I again bled him to ℥x., and continued the former treatment.

3. Has had no return of the shivering; slight fever; tongue white; pulse 98. ℞ *Submur. hydrarg.*, grs. v.; *Pulv. antimon.*, grs. ii.; M. Continue the saline mixture.

4. Continues better; pulse 86.

5. Has had a good night; feels considerably better; pulse 84; skin cool; tongue much improved; gave him small doses of sulph. quinin.

6. Continues to improve.

8. Has had no return of any of the symptoms; pulse natural; skin cool. Have given up attending him, but he still continues to take the quinine. He states that he feels much better than he did on former occasions, and not nearly so debilitated as after previous attacks.

Another case, of a similar nature, was treated in the same manner; both patients are now enjoying good health. In both these cases the debility occasioned by the old treatment was so great that it incapacitated the one from working during six weeks, the other during two months; whereas, by bleeding in the cold stage, the one was able to attend his business in ten days, the other, at the expiration of a fortnight. It is to be regretted that the latter mode of treatment is not more generally pursued. I am, Sir, your's respectfully,

WM. J. MACKARSIE, Surgeon.

Kilsby, July 8th, 1837.

DOSES OF OXYMEL RECOMMENDED IN THE NEW PHARMACOPŒIA.

To the Editor of THE LANCET.

SIR:—On observing the formulæ given in the new Pharmacopœia for the preparation of "oxymel," I am unable to satisfy myself whether the important alteration which has been there introduced is intentional, or whether it is to be classed among the numerous blunders which characterise this unfortunate specimen of the pharmaceutical wisdom of the College of Physicians. The "authorized translator" gives, as the dose of oxymel, ℥j. to ℥ij. This seems to imply that the increase in strength of the acetic acid prescribed has been, in this instance, overlooked. Dr. Collier, in his remarks upon this article, makes some severe strictures upon the murderous propensities of the Censors of the College, and appears to think that a verdict of "Wilful Murder" ought to follow the indictment which he recommends. As this preparation is of frequent occurrence in prescriptions, I should feel much obliged if you, or any of your correspondents, could help me to a satisfactory conclusion on the point in question. I am, Sir, your's respectfully,

Q. Q.

THE CIRCULATION.

To the Editor of THE LANCET.

SIR:—According to the opinions of some modern physiologists, the principles of life and electricity are identical. Without presuming to decide upon the important question, I beg leave, through the medium of your valuable Journal, to submit a theory of the circulation of the blood; which, if found to be correct, will afford some corroboration of the system. I should not presume to lay my theory before the public in its present crude state, but from a conviction that the interests of science would be best consulted by the subject being laid open, in order that others, who possess the requisite opportunities, may test its accuracy; and that, if found to be correct, it may become available towards the prosecution of farther researches, and in the effecting of still more important discoveries.

It is a matter of certainty that iron is present in the blood of all animals. From the analogy of the works of nature, in which we always find that the "dulce" is exquisitely educed from, or blended with, the "utile," we are justified in concluding that the iron is there for some other purpose than to serve as mere colouring matter. That purpose I hold to be the carrying forward the process of circulation. Its agency, in this important office, I refer to some modification of electricity, the internal surface being in one electrical condition, and the internal surface of the lungs in an opposite condition.

The venous blood being in a state of electricity similar to that of the external surface, is repelled from the extremities, and attracted internally, while the arterial blood being in a state of electricity similar to the interior, is repelled thence, and attracted to the extremities, and thus the blood is urged onward in its course, without our being compelled, on the one hand, to suppose that the heart possesses the incredible muscular force which the laws of hydraulics would require; or, on the other hand, to admit the expansibility and contractility of the blood-vessels, which, from their structure, as well as from physiological observations, we do not perceive them to possess. I remain, Sir, yours very respectfully,

JAMES RIDDALL WOOD.

Manchester, July 31st, 1837.

To the Editor.—SIR:—In THE LANCET of the 5th inst. appeared a paper on carbonate of iron, from Mr. Hiley. Will you allow me to ask that gentleman, through the medium of your Journal, how he *dried* the samples which he was so fortunate to obtain, varying from 27½ to nearly 34 per cent. of carbonic acid. I am, Sir, &c.

S. A. SANDALLS.

St. Thomas's Hospital,
Aug. 15, 1837.

CASES OF CHILDREN.

To the Editor of THE LANCET.

SIR:—If you deem the following cases worthy of record, they are at your service for insertion. I am, Sir, your obedient servant,

E. CRISP.

Walworth, Aug. 12th, 1837.

IMPERVIOUS COLON.

CASE 1.—July 20th, 1834. I attended Mrs. A., East-lane, Walworth, with her sixth child; the labour was short, and the child at birth appeared perfectly healthy, but after a few hours it began to vomit a dark-coloured fluid; the vomiting continued at intervals for about 24 hours, when the infant died. The bowels were not relieved.

I examined the body 20 hours after death, and the following were the appearances:—

The small intestines were much distended with air; the peritoneal coat was congested; the rectum and colon not larger than a common sized goose quill; the mucous lining covered with a white pulpy matter; the colon, at about an inch and a half from the cæcum, terminated in a perfect *cul-de-sac*, beyond which the intestine was impervious to the extent of half an inch. No morbid change was observed in any other part.

OBSTRUCTION OF THE CYSTIC DUCT.

CASE 2.—July 5th, 1837. I delivered Mrs. S., Vassal-road, Brixton, of a fine and apparently healthy girl. The child remained well until the 8th, when a yellowish tinge was observed on the skin, which gradually increased; on the 10th the bowels were frequently relieved; the motions were yellow and watery; the child often drew its legs up towards the abdomen, and appeared to suffer pain, but continued to take the breast until the evening (10th), when the mother observed a sudden change in the symptoms; the face and extremities became cold, the breathing hurried, and death took place at 8 o'clock on the following morning.

Examination of the body 24 hours after death.

My attention was first directed to the gall-bladder, which I found quite empty, the surrounding parts being tinged with bile: about one-sixth of an inch from the commencement of the cystic duct I observed a hard, yellow protuberance, about the size of a pea, between which and the neck of the gall-bladder was an ulcerated opening, through the duct, which would admit the end of a common sized blow-pipe; the edges of this opening were thin, and of a livid appearance; the hepatic and common ducts were quite pervious, and the structure of the liver healthy; the stomach contained a little curdled milk, and the intestines a small quantity of yellow mucus; the peritoneum was not inflamed; indeed, the morbid condition of the cystic duct was the only discoverable deviation from healthy structure.

I removed the gall-bladder with the ducts, and, after making a more minute examination, I found the protuberance to consist of hard inspissated bile, on the removal of which the duct on the intestinal side was readily distended with the blow-pipe.

Remarks.—I conceive that the above cases are interesting, as shewing that death may arise from causes which cannot even be guessed at without having recourse to a post-mortem examination. I believe there are but few, if any, cases on record similar to the one last described. The cystic and common ducts had been obstructed by calculi, &c., for a considerable period, but I think that ulceration in consequence is of rare occurrence. The symptoms clearly pointed out the changes which were going on during life. The intestines were plentifully supplied with bile from the common duct; the greater part of the bile in the gall-bladder was taken up by the absorbents, and hence the yellow state of the skin. The opening, probably, took place on the evening before death; the cause of this opening, I imagine, being the imperfect supply of blood to the part, arising from the great distention of the duct, and consequent pressure of its vessels; the livid appearance of the parts around the ulceration would, I think, warrant such a conclusion.

ANOTHER SPECIMEN

OF THE

EXAMINATIONS AT APOTHECARIES' HALL.

To the Editor of THE LANCET.

SIR:—I am happy to see that the Professor of Medicine, in the University College, has at length denounced the system pursued in the examination of students at the Apothecaries' Hall, a system which has long been painfully known to the junior branches of the profession. When I was a student, eight or nine years ago, it was the common talk of the school to which I belonged. In my examination before the worshipful body of "*Grandes Doctors doctrinæ*," "*De la rhubarbe et du senè*," I must acknowledge that I did not experience any of the very ungentlemanlike conduct complained of by so many. The first very undignified remark which occurred during my examination, was, when I was asked the process for making extract of elaterium; I had forgotten it, and immediately said so; my examiner pressed the question, and I then said that I had not been employed in the practical part of pharmacy.

"I am afraid, Sir," said he, "that you have thought the study of pharmacy beneath your notice, but I can tell you that you will find it very useful to you, *unless you purchase your drugs at this Hall.*" Yes, these were his words, "UNLESS YOU PURCHASE YOUR DRUGS AT THIS HALL." He looked at me as if he expected a reply, but I made none, and he continued his examination. Everything went on smoothly until we came to the practice of medicine, when he desired me to describe the symptoms of nephritis. I stated them. "The treatment?" "Bleeding, low diet, &c., &c., and mercury to the extent of a gentle ptyalism." He started with astonishment, whisked off his spectacles, and began rubbing the glasses very energetically with his red silk pocket handkerchief. "What, Sir, mercury? Ptyalism in nephritis? Consider, Sir, consider, that here —you—have—a—case—of—acute inflammation."

When my examination commenced, there were four examiners at the table at which I was seated, but as the inquiry proceeded, these left the spot, one by one, until I remained alone with my examiner. Now, however, seeing that there was something the matter, they hastened back, and resumed their seats. I thought that they would reject me if I persevered, so knowing what they wished me to say, and not being anxious for the crown of martyrdom, I amended (?) my answer, and said, "Mucilaginous drinks, and oleaginous purgatives."—"To be sure, Sir; why could you not say that at first? you are getting careless, Sir."—"What are the symptoms of peritonitis?"—I gave them. "Well, Sir, and what is your treatment?"—I felt ashamed of having given way in the former instance, and determining not again to be so cowardly, I replied, "Copious, local, and general bleeding, fomentations, low diet, &c., and mercury to ptyalism." A general start was given all round the table. I added, "I have been taught to give mercury in every severe case of inflammation."—"Where, Sir?"—"At St. Thomas's Hospital."—Oh, by Doctor Elliotson?"—"Yes, and by Dr. Roots."—"Does Dr. Roots give mercury in inflammatory diseases?"—"Yes, he does."—After a short pause my examiner resumed. "What are the symptoms of rubeola?" I gave them. "And what is the treatment, Sir? I do not ask you what you have been taught in town, but give me the treatment you have seen pursued in the country."—"I scarcely remember," I said, "having seen any cases of measles in the country."—"Indeed! Well, what is the proper treatment of the disease?" I replied, "If the disease be slight, it requires no treatment, beyond a dose or two of purgative medicine, and low diet for a few days."—"And what, if the case be severe?"—"If there be severe bronchitis, I should treat it like any other case of bronchitis, by bleeding and mercury." My examiner threw himself back in his chair with the air of one who says, "this fellow is incorrigible," but made no remark, and, after a short pause, he turned to the other examiners, and asked if they wished to put any questions to me. They shook their heads in ominous silence. The following converstion then took place:—

1st *Examiner.*—"Well, gentlemen, I do not know whether it is your opinion that we should recommend this gentleman for his diploma. *I know that he should not treat* ME."

2d *Ex.*—"Nor me."

3d *Ex.*—"I did not hear the former part of his examination."

1st *Ex.*—"Why, he acquitted himself pretty well in the former part; but, really, his practice of medicine is most ——."

3d *Ex.*—"But you must recollect that he has been educated at a *peculiar school.*"

1st *Ex.*—"Yes, certainly. Ah, well, Sir, you may retire. We will consider of it."

In due time I was called up to receive my diploma from the chairman, who exhorted me not to consider my education as completed, but to continue my studies, "especially in—(the practice of medicine, thought I; but no, not a word of that)—especially in *anatomy.*" Now, my examination in anatomy had certainly been most superficial, but I had not been wrong in a single answer in it.

The above facts do not require any comment from me. I enclose my name and address, and am ready to verify them personally. I am, Sir, your most obedient servant,

SIGMA.

August 16th, 1837.

MR. WINSLOW'S GUIDE TO THE COLLEGE.

To the Editor of THE LANCET.

SIR:—As the review which appeared in No. 727 of THE LANCET, of a little work of mine, is calculated to injure my professional reputation, I hope and trust, in justice to me, you will give an immediate insertion to the following remarks in reply:—

In order to insure the insertion of this letter, I shall confine myself to one or two observations, which may have the effect of removing the impression which the review in question is calculated to produce on the minds of the readers of your Journal.

Notice has been taken of several typographical errors, and these have been pointed out as specimens of my anatomical ignorance. I will admit that there are some typographical inaccuracies in the "Guide" which I corrected in the proof sheets; but which, through the gross carelessness of the compositor, were not attended to prior to the

work finally going to press; but, surely, every medical work might be held up to ridicule, if the reviewer thought fit to hunt out these typographical errors, and bring them forward as *proofs* of the ignorance of the writer.

Your reviewer never could have thought, that in speaking of the origin of a particular muscle, that the word "organs," for origin, was used by me intentionally. This is so evidently an error of the compositor that I think, in common fairness to me, it ought to have escaped criticism.

As a specimen of a few "blunders," your reviewer gives the following as a quotation, which he says, "will satisfy the most *lenient* of critics." These words are not placed in inverted commas, but it is evident he intended his readers to suppose that it was an extract from my work:—

"The thorax and abdomen form *one* great cavity in the body." What I say is this:—"Two great cavities in the body (meaning the skeleton), one anterior and inferior, comprising the thorax and abdomen; the other, posterior and inferior, formed by the union of the vertebral canal with the cranial cavity" (page 2 of the "Guide"). In page 99, of Dr. Quain's "Elements of Anatomy," the same "blunder" is committed, if it is to be considered as one.

Again, I am made to say that "the gustatory nerve enters the angular foramen of the lower jaw." I say no such thing, and why should I be held up to censure, for words I never used? At page 19, to which you refer your readers, *I do not say what passes through the angular foramen*!*

Again, in speaking of scirrhus of the testicle, the reviewer makes me say that, "the tumour forms beneath the emulgent artery." The following are my words:—"the testicles are tuberculated on the surface; the spermatic cord is enlarged; the (it should have been *a*) tumour forms beneath the emulgent artery."

By referring to the latest edition of Sir Astley Cooper's Lectures on Surgery (page 382), which I believe were originally published in THE LANCET, your readers will perceive that I use Sir A. Cooper's *own words*; consequently, the blunder is his, and not mine.

Perhaps, in conclusion, you will allow me to say, that in the second edition of the "Guide" just published, all the errors which, through the unpardonable carelessness of the compositor, were allowed to remain uncorrected, are removed, and I still flatter myself that the work will be useful to students preparing for their examination. Trusting for the insertion of this letter to that spirit of impartiality which ought to influence every public journalist, I remain, Sir, your obedient, humble servant,

F. WINSLOW.

August 13, 1837.

*** The charges of misquotation contained in the foregoing letter are well replied to by the author himself in that document, but as Mr. Forbes Winslow affects to believe that we have done him injustice in the brief catalogue of blunders which we compiled from his "Guide," we shall take the trouble to make another series of extracts from that imbecile production. It contains abundant proofs, and to spare, that in bestowing ridicule on his pretensions to a knowledge of anatomy, we were not indebted, for the grounds of comment, simply to *typographical errors*. Truly enough, we did laugh at some of these. Who could help it when, by a misprint of *molar* for *malar*, the jaw-teeth were taken from a man's mouth, and transferred to the neighbourhood of his eyes? But we also lost all patience at the number of errors of the press. A few might have been unavoidable in a great work; but here was a "Pocket Guide," expressly professing to cram the student's head with *short terms*, and not *ideas*,—that circumstance in itself more especially demanding exactness of spelling,—every page of which contained an error,—nay, hardly a term in the whole concern seemed to be free from incorrect orthography, or to be intelligibly expressed. These are not "faults of the compositor." That excuse cannot be permitted. Mr. F. Winslow's "longings after immortality" must be very peculiar, when he can allow his production to be ornamented with printer's Latin. Its *publication* was certainly the author's own act,—his own means of acquiring "respect for his professional reputation." But let us descend to minutiæ. Although the task will occupy considerable space, yet the occasional exposure of such impositions on the "pocket" of medical students, is worthy of the room, for the good effects produced will not be limited to the scribblings of a single author.

We accused Mr. F. Winslow of stating in a book which is intended for the use of students who are about to present themselves for examination at the Colleges of Surgeons, that the thorax and abdomen form one great cavity in the body. His words are,—

* Mr. Winslow does not, "totidem verbis," say this, but the manner in which he describes the gustatory nerve, as being protected by the internal lateral ligament, justifies the statement which we made.

"Two great cavities in the body—one, anterior and inferior, comprising the thorax and abdomen," &c. Now, if it do not logically and necessarily follow from these words that the thorax and abdomen form one great cavity in the body, never more will we attempt to criticise. Mr. Winslow, in his letter, endeavours to father his blunder upon Dr. Quain. We have no time now to refer to Quain's "Anatomy," though if that learned author have really written *body* instead of *skeleton* we would advise Mr. Winslow to seek another authority for his chamber anatomy on all future occasions. But, in fact, Mr. Winslow might as well refer us to Dr. Quain for the very curious statement, that there are only two arteries in the human body. But, pray, from what system of anatomy did he obtain the following question and answer? (p. 39)—"How many ventricles are there in the brain?—*Four;* two lateral, a middle, and an inferior one." Perhaps, however, this also is a *misprint*.

Having disposed of Mr. Winslow and Dr. Quain, we turn to Mr. Winslow and Sir Astley Cooper, for the author of the "Guide" has a method which is peculiar to himself, of shifting his errors upon other people. Under the head *scirrhus* (in the "Guide") we find the following words:—"This is a rare disease; it begins in the body of the testicle, with an extremely hard swelling; it feels like a marble body within the scrotum. The testicles are tuberculated on the surface; the spermatic chord is enlarged; the tumour forms beneath the emulgent artery." Now, to what can "the tumour" possibly refer in the above sentence, unless it be to the term *scirrhus?* and any student, on reading the passage, would inevitably conclude, that the emulgent artery was situated somewhere in the neighbourhood of the testicle. Yet the blundering author coolly assures us that if this be an error, Sir Astley Cooper is "particeps criminis;" and, moreover, assures our readers that he has quoted Sir A. Cooper's *own words*. On referring to Sir A. Cooper's lectures on diseases of the testicle, published in THE LANCET, vol. iii., p. 32, we find the following sentence:—"After the spermatic chord has become enlarged, a hard tumour forms beneath the emulgent artery, which may be felt through the abdominal parietes." —Reader, have we misrepresented Mr. Forbes Winslow? or has Mr. Forbes Winslow, after misquoting Sir A. Cooper, had the effrontery to charge the Hon. Baronet with the blunder of the ignorant Mr. Winslow?

So much for errors already exposed once, and now doubly exposed. Now for a few fresh examples. In reviewing his precious specimen of what compression can effect in literature, we stated that Mr. Winslow was totally unfit to write either Latin or English; we did not furnish many proofs of this, conceiving a few examples to be sufficient, but we shall now reinforce them with some from the English side, lest Mr. Winslow make a second appeal upon that score. His Latin, being the fabrication of his printer, we will say no more thereon. The following are examples of choice English composition:—

"Muscles of the tongue. In the middle there is the genio-hyo-glossus; more outward *is* the linguales; more outward still *is* the stylo-glossi; next to *that* the hyo-glossi; next the palato-glossi." (P. 17.)

"In applying a ligature to an artery, the middle and internal coat *is* cut through." (P. 4.)

The author of the "Guide" is not even acquainted with some of the most familiar methods of expression in surgery. Thus he says "Dislocation of the os humeri, *in* the axilla, and dislocation of the femur *in* the foraman ovale."

To the instances cited in our last notice of Mr. Winslow's proficiency in anatomy, we add a few others which the author of the "Guide" will find it rather difficult to fasten on "Quain's Anatomy."

At page 29 he enumerates the pectoralis major, and the pectoralis minor, amongst the muscles arising from the scapula. The scapula, he informs his readers, has two surfaces, one anterior, and one superior.

The cavities of the vestibule, cochlea, and semicircular canals, are said to be lined with the portio mollis of the 7th pair. This must be a new discovery. We never before heard of nervous filaments being traceable throughout the semicircular canals.

In describing the ligaments of the hip-joint, Mr. Guide forgets the capsular ligament. He also omits to mention two of the ligaments attached to each rib.

In the surgical department the genius of Mr. Winslow shines yet more effulgently. While giving directions for tying the femoral artery, Mr. Winslow says, "In taking up the femoral artery, divide skin, superficial fascia, perhaps vena saphena major, superficial set of lymphatics, then the fascia lata femoris."

This is excellent. *Perhaps* vena saphena major! And, mark, Mr. Winslow uses the *imperative* mood. What a smart off-hand surgeon he must be at an operation. Were he to describe the steps in lithotomy, he would, by analogy, speak thus:—"In cutting down on the membranous portion, make oblique incision into integuments, three inches long; cut through superficial perineal fascia; divide transverse muscle, deep fascia, *perhaps* internal pudic artery, &c."

We have already exemplified Mr. Winslow's peculiar ideas on the anatomy of the

brain; some of his opinions on the diseases of that organ are not less heterodox. Thus, "It is necessary, in order to bring the brain back again to its natural state, in concussion, that inflammation should be established; but nature is not capable of keeping the inflammation within due bounds, and it goes on until it becomes a disease." Fortunately for those who are, from time to time, like our brethren in Ireland, liable to receive knock-down blows on the head, this theory is altogether erroneous. Loss of voluntary power, consciousness, and intelligence, after a violent blow on the head, must depend on a greater or less degree of concussion of the brain, unless extravasation be produced; and every practical man knows, that many persons recover from the effects of stunning injuries, without the slightest evidence of inflammation of the brain supervening.

But enough of this. The army of ignorant and illiterate pioneers for our medical youth, will probably lose a recruit in Mr. Forbes Winslow, who, most likely, will not again join their ranks until he has, at least, doffed his printer's Latin, added a fifth ventricle to his unfortunate brain, and assured himself, by private practice, that living arteries do not *gape;* and then he may take front rank in the troop.

INQUEST ON THE BODY OF AN INFANT FOUND DEAD.

To the Editor of THE LANCET.

SIR:—Although we are daily furnished with examples of the deplorable and inefficient methods of performing the coroner's duties at inquests, perhaps a more prominent example has not recently occurred than that which is furnished by the report of an inquest held in the Spitalfields' Workhouse.

The body, that of an infant, was found under extremely suspicious circumstances. Mr. Byles, the surgeon, stated that he found "several superficial wounds on the trunk and arms; the lips and tongue much swollen and discoloured; and a mark round the neck as if it had been tightly confined; left scalp exceedingly tumefied and discoloured; left eye much blood-shot; left side of the face bruised; and blood coming from the nostrils." Internally he found "the lungs fully expanded, and a portion, cut off, *floated in water*, being the usual test of previous respiration, and, consequently, of previous life. In the head, left parietal bone much more yielding, and, in the centre, it appeared bruised and crushed; a considerable coagulum beneath the dura mater, *corresponding* with the injury of the bone and the contused scalp; also a coagulum of blood at the base of the brain. The heart contained a moderate portion of coagulated blood. Stomach empty, and intestines contained that which showed that it had been suckled." Mr. Byles goes on to state,—"I consider that the child had not only been born alive, but had lived many hours. From the appearance of the body at the time of examination, I consider that it had been dead, at least, forty-eight hours."

It appeared, further, from the evidence of the policeman, that the infant's clothes were saturated with blood.

Yet, Sir, upon this evidence, upon which every honest man, in his senses, would strongly suspect and infer the existence of foul play before death, the coroner charged the jury,—"That the infant might have died by a fall. With respect to the lungs floating in water being the test of an infant being born alive, *that doctrine had been now exploded*, for it had been subsequently ascertained that the lungs of infants, who had been born dead, had floated in water." The coroner then read extracts out of a work on parturition, to prove that such might have been the case in the present instance; if so, the jury would find their verdict accordingly.

Now, in this charge, it is first declared that the child *might have died* by a fall. Here is not only an admission, but an absolute assumption, that the child was *born alive*, but died a violent death. To the question of accidental, or wilful, violence, the coroner never thinks it necessary to direct attention. After admitting the life and violent death of the child, he next tells the jury, that the hydrostatic test, or the floating of the lungs in water, has been exploded, as the lungs of children born dead had floated in water, and such might have been the case in the present instance.

Now, Sir, I beg to ask Mr. Coroner to explain how it could happen that the child, born alive, and dying by violence, (see the first part of his charge,) could be the identical child born dead according to the second; and to reconcile the fact of the lungs floating in water with the verdict he would have forced upon the jury.

Let me next assure the coroner, that he is grossly mistaken in his facts. The hydrostatic test is *not* exploded, but is relied upon. The lungs of a fœtus born dead may float in water; but this arises from the buoyancy acquired by air generated during decomposition, or, as it is termed, putrefaction. Now, the lungs are the parts of the body which undergo putrefaction more slowly than any other parts, and, consequently, in the absence of anything like putrefaction externally, we may fairly presume that the buoyancy of the lungs did not arise from putrefaction. But allowing a question even here, surely the coroner should have sought to explain that this buoyancy was to be distinguished from that

which is the result of respiration, by precautions explained in every work upon forensic medicine. Rules are laid down for distinguishing between the buoyancy arising from respiration, and artificial inflation of the lungs. These points the coroner should have elicited, and to them he should have directed the attention of the jury.

The jury, however, in this instance, preferred thinking for themselves, very properly rejecting the advice of a counsellor who first tells them that the child was born alive, and came to its death by a fall, and in the next breath tells them, that the probability is that it had been born dead, because the proof of vitality upon which the surgeon relied had been found without modification, and adaptation, to be *not absolutely* and *unequivocally* certain.

Such arguments! Such logic? We may presume that the jury, though ignorant and uninformed, as coroners' juries generally are, to have thus reasoned with themselves:—"This man tells us the child was born alive, and perished by an accidental fall; he next tells us that the child was born dead, and therefore there can be no blame imputable anywhere. This man blows hot and cold in the same breath. He reconciles contradictions by a mere *ipse dixit*, and expects us to swallow his inconsistencies, and digest them at our leisure. But in the solemn exercise of a sacred duty, we shall convince Mr. Coroner that we have a judgment of our own, and a conscience to which we feel we owe something; and, therefore, notwithstanding these learned observations of folly and ignorance—of presumption and contradiction—we shall return a verdict of—"Wilful murder against some person or persons unknown."

I have attended a little to forensic medicine, and I happen to know personally some of the most eminent teachers of this branch, and if the coroner will consent to receive a few instructions in this department of medicine, I will use my influence to procure him a free admission to lectures on this subject; or, this failing, will willingly purchase one for him, feeling that in so doing I should be conferring a benefit upon the public. I am, Sir, &c. JURIDICUS.

EXPERIMENTS MADE TO ASCERTAIN WHETHER IODINE IS A CUMULATIVE MEDICINE.

DR. COGSWELL, in a work just published, on iodine and its compounds,* relates the following experiments, which were made by him, to ascertain whether iodine be an accumulative medicine or not, and which experiments, he observes, "though surrounded with sources of fallacy, have afforded results which, at least, are curious, and, if they have led to no decided inference, are so far important, as showing the inquiry to be more involved than it appears to be on a cursory inspection."

The experiments consisted in the "examination of the urine of individuals who had been taking the different preparations of iodine, as it occurred to him that the space of time within which this substance appeared in the urine, would indicate, in some measure, the rapidity of its absorption, while the period of its disappearance from that secretion might show, on the other hand, how soon it had all passed out of the system." The experiments were tried upon eleven individuals, some of them healthy young men, others of them patients, to whom the medicine was suited in the course of treatment for the various maladies under which they laboured.

"The dose of tincture of iodine usually given was fifteen drops, containing about a grain of iodine; and water, designedly, in compliance with custom, was employed as the vehicle.

"1. A man with a chronic papular eruption, took the tincture thrice daily for five days, when he left the hospital. The urine was tested every day about four hours after the morning dose. Iodine not detected.

"2. A man with diseased liver took four grains of hydriodate of potash, three hours after which the iodine appeared in the urine,† and the medicine was stopped. In twenty-four hours iodine could not be detected.

"The same patient took the *tincture* three times a-day for six days, before the iodine made its appearance. The hydriodate of potash was resumed on the sixth day following, and was found in the secretion four hours after a single dose of one grain.

"3. A gentleman. Iodine found four hours after the first dose of the tincture. He continued taking it thrice daily for five days; on the third and fourth it disappeared, but on the fifth it again became visible.

"4. A gentleman. Took the tincture at the rate of thrice daily for forty-eight hours. About four hours after the last dose, iodine was detected.

"5. A gentleman. No iodine in the

* An Experimental Essay on the relative Physiological and Medicinal Properties of Iodine and its Compounds, being the Harveian Prize-Dissertation for 1837. By Charles Cogswell, M.D., M.R.C.S., &c. Edinburgh: Black and Co., 1837, 8vo. pp. 179.

† "Combined iodine is meant to be understood on all of these occasions."

urine five hours after a dose of the tincture. I did not see him again for five days, during which he took about twenty drops a-day. The iodine was then present.

"6. A gentleman. Took three doses in one day, by mistake in Sherry wine. Iodine apparent in the urine passed shortly after each dose. On omitting the tincture there was none detected on the following day. The same gentleman, about a week after, took fifteen drops in water, having his bladder empty at the time. In the urine passed in three hours, no iodine; at five hours it began to appear; at seven hours strongly characteristic; at eighteen hours absent.

"7. A gentleman. Tincture twice daily for three days. About four hours after the fifth dose, iodine detected. It was now omitted, and on the day following none existed in the urine.

"The next experiments were with the iodide of iron, in solution.

"8. A patient with liver complaint and irritable bowels. Took a grain thrice daily. Detected four hours after last dose.

"9. A man labouring under secondary syphilis. Took a grain of the iodide. Iodine found in the urine passed three hours afterwards.

"10. A gentleman. Took a third of a grain *bis die*. Iodine detected four or five hours after the third dose.

"11. A gentleman. Took a grain in the afternoon. Iodine not found early the next morning, but characteristic at noon. (This individual complained of heat and thirst in the interval, from the effect of a rich supper.)"*

"Complicated and troublesome beyond my expectation, as this inquiry has turned out,† I think we can deduce from the above results, that iodine taken, as it has been usually prescribed, in the form of tincture mixed with water, becomes less readily absorbed, and probably remains longer in the bowels, than in the other forms already mentioned.

"Sometimes the *iodine* made a quick passage to the kidneys, but in the greater number of cases its appearance in their secretion was exceedingly tardy, unless indeed it made its escape in the intervals of testing the urine, which does not appear probable. It even varied in the same individual at different periods, appearing, departing, and re-appearing, without any evident cause.

"The same was not the case with the iodide of potassium, and perhaps of iron; the former is even noted for passing rapidly out of the system."

The chief objections to these experiments, says the author, "are, that the iodine *may* remain fixed in the tissues, without tending to make its exit by the kidneys, although for a substance possessing its tendency to form soluble combinations, this does not carry much weight, and it may be discharged through the bowels."

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* "The test employed was starch, followed by sulphuric acid, which last is the most delicate agent I have employed in the liberation of iodine. In two or three instances it developed the colour instantly, where nitric acid required much longer to act, and the same I have known happen in the hands of a well-known chemist. *Causa latet.* We should beware of being misled by the purple tinge which both of these acids possess the power of imparting to the urine.

"It is proper to mention, that Dr. Clendinning says he has detected iodine in this fluid twenty minutes after the first, and eighty hours after the last dose (of hydriodate of potash?) was administered."

† "None the less that one who professes 'to cast the nativity of urinals, and try diseases, like a witch, by water,' has certain prejudices to surmount, which, it is to be hoped, will soon fall before the growing importance of this source of information."

UNIVERSITY COLLEGE HOSPITAL.

PURPURA SUCCESSFULLY TREATED BY LARGE BLEEDINGS.

W. F., aged 45, was admitted, March 20, under the care of Dr. Elliotson.

History.—He is a porter, of spare habit, has lived a regular life, and always enjoyed good health, with the exception of an attack of rheumatism and the influenza, and has always had good and sufficient food. Ten weeks ago he got wet in his feet, which brought on catarrh, followed, in a short time, by rheumatic pains in his lower extremities, attended with œdema, and dark red spots. These symptoms all occurred in one day spent in the pursuit of his usual avocation. On undressing in the evening he was surprised to find his limbs covered by spots of various sizes. The œdema always increased towards night, and the spots became redder and more inflamed. In the course of three weeks his hands also became œdematous, and the eruption appeared on the upper extremities, but unattended with pain. A month since he came under the care of Dr. Carswell, as an out-patient of this hospital. He has been salivated, and has taken an acid mixture, as also one producing a metallic taste; since taking the latter the eruption has been attended with a smarting and burning pain, increased at night.

Present state.—He has vibices and petechiæ appearing on the thighs, legs, forearms, and back of the hands, becoming raised above the skin, by long standing and

exertion, attended at night with a stinging and smarting pain. After resting a short time they recede, and cease to be elevated. Feels frequently cold and chilly; skin moist; gums red and spongy; breath fœtid; has an unpleasant taste in his mouth in the morning; thirst; pulse slow, rather full; feet and hands œdematous; has pain and numbness of the back of the feet with stiffness of the legs; has never had any discharge of blood that he is aware of.

21. Twenty-five minims of oil of turpentine every six hours.

25. Urine deeply tinged with blood since the day before yesterday. He has no pain in his loins; pain after making water; eruption much faded; gums better; feels stronger; omit the turpentine.

28. Feels much stronger; urine far less bloody; it is made clear, but a few drops of blood succeed to its discharge. Has frequent desire to make water; less smarting than he had; eruption the same; two minims of creosote every fourth hour.

April 1. Urine quite natural, quantity large; no fresh eruptions out. Medicine does not heat him; increase the dose to three minims.

8. Eruption fading; œdema and pain less.

11. General health improved, but the œdema increased in the legs. Increase the medicine to four minims.

18. Eruption much increased from walking about the wards. The dose to be increased to six minims.

22. Feels stronger; eruption considerable on the legs, which are hot and painful; eruption bright, urine natural; no discolouration of it. Omit the creosote, and take twelve ounces of blood from the arm.

25. Blood buffed, and cupped; eruption very much paler; pain and heat in the legs and feet diminished. To be bled again to twelve ounces.

29. Was relieved by the bleeding, but since then the eruption, particularly on the legs, has been more out, and tingles very much; the pulse still full and strong. To be bled again to twelve ounces.

May 2. The eruption, pain, and swelling greatly diminished; blood buffed and cupped; pulse continues full. Eight ounces of blood to be taken.

9. Eruption still pale, but the hands and feet are constantly more or less swelled, and hot. Eight ounces of blood again.

13. The tumefaction of the feet and hands much less; eruption less. Colchicum wine, half a drachm, and ten grains of carbonate of magnesia.

16. Dr. ELLIOTSON thought that the pulse justified further loss of blood. He was accordingly bled to eight ounces.

22. Eruption is still out, accompanied with heat, and a sensation of tingling and swelling. The eruption on the legs appears to be as bad as it was a fortnight ago. Bled again to eight ounces.

26. Eruption has been less for the last two days, but again more out, with burning and tingling. Bled to eight ounces.

30. Eruption diminished after bleeding; blood buffed and cupped. Bled again to ten ounces.

June 2. Eruption more diminished than at any previous time. No tumefaction.

3 to 6. Bled twice; general health good.

10. Eruption less, but much smarting and tingling. Bled again to ten ounces.

13. Eruption much out to day. Bled again to ten ounces.

17. Eruption more out and general than usual, accompanied with aching pain and tenderness over the left hip. Bled to ten ounces. An acupuncture-needle applied to the hip.

20. Eruption more faded and diminished than it has been for some time. No tumefaction. Rheumatism gone.

22. Eruption almost entirely gone. General health good. Bled again to twelve ounces.

25. Discharged, nearly cured.

Remarks.—In lecturing on this case Dr. ELLIOTSON observed, that the plan of treatment pursued rendered it particularly interesting. The pathology of purpura was very obscure; some had considered this disease to be analogous to scurvy, but the only point of resemblance between them was the presence of the purple spots. There was as much reason to consider scarlatina and measles as the same affection, from both of them attacking the same structure. The difference of treatment, too, was against the opinion, bleeding in purpura being frequently of great advantage, while the chief remedy for scurvy was lemon-juice, a medicine which had no control over purpura. Under the treatment employed, W. F. had left the hospital nearly well. The loss of blood had always been attended with advantage; his pulse before each bleeding was always full. The patient had come to the hospital after his dismissal, and was still improving, though it was probable that he might again require to be bled. One hundred and fifty ounces of blood had been taken in the interval between the 25th of April and the 22nd of June, and yet he was stronger at the expiration of that period than at the commencement. The case proved that purpura might be of a highly inflammatory character; yet many cases were treated with stimulants of all kinds,—sometimes, no doubt, with propriety, though

not always so, but, on the contrary, occasionally injurious, while others were treated in a "do-nothing way," which was almost as dangerous.

In the comments on this case Dr. Elliotson says, according to our reporter, that whatever powers the citric acid may exercise over scorbutic affections, it possesses none whatever in cases of purpura. This statement is, doubtless, in conformity with the learned professor's experience, and may be true so far as adults are concerned; but we have had several opportunities of witnessing the good effects of citric acid in cases of purpura occurring in children. Indeed, it forms the basis of the method almost invariably employed at the Children's Hospital, Paris, by MM. GUERSENT, JADELOT, and BAUDELOCQUE.

Although children are subject to a variety of affections which are supposed to be more or less connected with debility, yet purpura hæmorrhagica is comparatively a very rare disease amongst them. Out of several thousand cases of diseases of children which have passed before our eyes during the last few years, we have not seen more than five or six of purpura, and those were treated with citric acid, the patients all recovering, except in two instances, where examination of the body showed the existence of remarkable organic lesions in the intestinal canal. One of these latter cases has been already published in this Journal. From the successful examples which we possess, the following may be selected, to shew the effects of

CITRIC ACID IN PURPURA.

Louis Charpentier, 6 years of age, a boy of feeble, unhealthy appearance, was brought to the Children's Hospital, Paris, on the 16th of March, 1836, and placed in the wards of M. Baudelocque. Within the last three days the parents of the child report having observed a number of dark-looking spots on his body, and remarked that his spittle and evacuations were tinged with blood. They acknowledge that the child has been ill-attended to, is badly lodged, resident in an unhealthy apartment, and never touches a morsel of animal food, living exclusively on vegetables.

On stripping and examining the child we find the body marked by a number of small spots, of a reddish-purple colour, occupying chiefly the abdomen and lower extremities. These spots bear some resemblance to fleabites, but are of a darker colour, and do not yield under pressure. In addition to these spots which are extremely numerous, the left thigh, and the middle part of the right leg, present two large spots, of a deep violet colour, and nearly as broad as crown pieces. A part of the gums appears to be fungous, and bleeds at the slightest touch, but we cannot discover any trace of ecchymosis on the inside of the mouth. The child does not present any feverish symptoms. The skin is cool, and rather moist than dry; the tongue perfectly clean; no pain is felt in the head; no thirst; appetite good; pulse 76 to 80, not strong; respiration natural. On examining the chest by auscultation and percussion we discover nothing wrong. The child passes one or two stools daily, but they are at present merely of a brownish colour, without any actual admixture of blood.

The treatment adopted by M. Baudelocque in this case was excessively simple. He ordered the administration of three sulphurous baths, during the week, for the purpose of stimulating the skin; gave some good soup for food, and directed that the patient should drink abundance of lemon-juice and water (*vegetable limonade*). This treatment had not been pursued a week when its good effects were manifest. On the 21st the little patient ran about the wards, apparently in good condition. The spots had now nearly withered away, and become of a light-yellow colour; the alvine evacuations were quite natural; the gums, however, continued to bleed a little. Continue the remedies.

March 23. No change, if we except a trifling inflammation of the gums at the left side of the mouth. Continue remedies.

28. Child nearly well. The gums are now quite smooth, and bleed no more; pulse 70; respiration 20, natural; spots faded; evacuations perfectly healthy; appetite good. Left the hospital cured on the 31st of the month, after an illness of eighteen days. P. H. GREEN.

This case illustrates the utility of vegetable acids in purpura. Some allowance must be made for the effects produced by change of diet, but this alone would not, probably, have brought about so rapid an amendment. The citric acid was the only thing in the shape of medicine which was given, and, from experience of the diseases of children, we certainly think that vegetable acids are sufficient to effect a cure in all cases of purpura where the internal mucous membranes are not extensively affected.

ABSCESS IN THE LUNG, INDEPENDENT OF TUBERCULAR DEPOSIT.—RECOVERY.

CH. B., a maid of all-work, states that about a month ago she was seized with gid-

diness in the head, and a darting pain in the epigastrium and left hypochondrium; the day following she had vomiting and diarrhœa.

Present symptoms.—Pain in the forehead, and in the epigastrium and right and left hypochondrium, with tenderness, pallor of the countenance, and great debility. She has aching pain and tenderness in the cervical, dorsal, and lumbar regions. Does not sleep well at night. Deglutition is painful. Respiration occasionally uneasy. She coughs more by night than by day; pulse 112, weak; catamenia are always irregular and scanty. They have not appeared for the last seven months. Tongue and lips pale. Dr. Elliotson, finding no local symptoms whatever, except those so common in hysterical patients, considered the case one of anæmia and chlorosis, and ordered her to have full diet and half an ounce of the sesqui-oxide of iron, three times a day. She went on well from the 27th of February to

March 3, when she was not so well. She vomited once last night, and did not sleep so well as usual. Feels pain in the left hypochondrium on taking a deep inspiration.

6. Is rather better than at last report. The pain is now only on the left side of the cervical and dorsal regions, extending through the body to the anterior median line. She has also pain in the left side of the thorax, in front, and pain on taking a long inspiration.

7. Better, but feels pain in the left side of the thorax on taking a long inspiration.

14. Has been improving since last report; no pain or tenderness anywhere.

16. Taken worse to-day; has tenderness and pain in the epigastrium; rigors; pain in the right side of the thorax on taking a deep inspiration; pyrexia; pulse 104. The iron was omitted, and a purgative given; her bowels were kept moderately purged daily; she had various symptoms of hysteria, such as flatulence, general tenderness of the surface, &c.

25. The febrile symptoms having subsided, the iron was again resumed, each dose being followed by a minim of creosote, to check a tendency to vomiting which had come on.

28. Feels better and stronger altogether; the general tenderness of the surface gone.

April 1. Again feverish, and is attacked with a troublesome cough, which continued to the 8th, when she began to expectorate more copiously, and the matter was purulent. Pectoriloquy and cavernous respiration distinctly detected on the left side of the spine, in a line with the inferior angle of the scapula.

Dr. Elliotson noticed that the patient had no cough or fever when she came in, but it was now very certain that there was an abscess in the lungs. He had great doubts as to its being tubercular: there was no dull sound under the clavicle. There appeared to be no reason why tubercles in this instance should have formed at the posterior part of the lung; the patient had received no injury in that situation. The question to decide was, whether or not the disease was phthisis. Iron appeared proper for the state in which the patient then was, Dr. Elliotson therefore ordered her to have meat, and proceed with her medicine. The abscess gradually increased in size; on the 15th the cavernous respiration was more extensive, but her general health was improved, the pulse was small, and 120. Dr. Elliotson did not anticipate a favourable result for the case, the abscess increasing to such an extent.

April 22. The pyrexia is gone, the heat of the surface has subsided, and she perspires at night; pulse 104.

25. The creosote producing nausea, it was omitted. She went on until

May 8, in much the same state; on that day she was taken worse; she was weaker; her cough was more troublesome; her pulse was 140, and weak.

9. Still very weak; no appetite; superficial tenderness of the trunk; skin dry; sometimes flushed; sometimes pale; thirst; tongue dry; bowels relaxed; pulse 132, and small; slept badly, but sputa not very copious, nor cough very troublesome. The iron was omitted. She took a grain of opium every night, and was supported by beef tea and milk. She went on much in the same state till the

16, When pectoriloquy was detected under the left clavicle, and the finger-ends were observed to be much enlarged.

23. Says she feels stronger than at last report; she breathes with less difficulty.

27. The opium was omitted to-day; pectoriloquy not so loud.

30. Continues to improve.

June 3. Better and stronger; pectoriloquy less extensive and less easily heard; still some cavernous respiration, but without the submucous râle.

6. Pectoriloquy still getting less.

17. Still improving; can take a deep breath easily.

July 10. Has been improving since last report. The cough is now nearly gone; expectoration has ceased almost entirely; sleeps well at night; has no pain, and has grown fat and strong. On examining the chest, we still find cavernous respiration on the left side of the spine; pectoriloquy doubtful; it is certainly very slight, if it do exist; dull sound on percussion.

11. Left the hospital to go into the country.

It was discovered a short time before the patient left the hospital, that before the occurrence of the pulmonary symptoms she

suffered much from a whitlow on the thumb, which was not opened, and the matter from which seems to have been partially absorbed. Whether this circumstance had any thing to do with the production of the disease in the lung, Dr. ELLIOTSON did not give an opinion.

LITHOTRITY. — MISMANAGEMENT WITH A CATHETER.—DEATH.

William Knox, aged sixty-one, was admitted on the 24th of June. About two years and a half ago he met with an accident, whilst on horseback, striking himself on the pummel of the saddle, for which he was cupped and leeched at the time, and was confined to his bed for a month; during this period he first experienced pain in making water, and when he took exercise he had small discharges of blood. About twelve months afterwards he passed a small stone, of about the size of a pea, from which he felt much relief. At present he complains of extreme pain at the end of the penis, extending up to the kidneys and down the thighs. He passes urine every half hour, mixed with clotted blood, sometimes stopping, then flowing again.

June 24. Mr. LISTON sounded him, and found two stones in the bladder, and ordered him to drink freely of barley-water, and to have his bowels opened with castor oil.

26. The lithotrite was introduced, and one of the stones easily crushed. The patient did not appear to suffer much pain from the process, and lost a very small quantity of blood.

Eight o'clock. The patient laboured under suppression of urine, which was mistaken for retention, by the house-surgeon then in office, whose plan of proceeding is described in the remarks made by Mr. LISTON, in lecturing on the case, and reported farther on.

27. The urine very scanty; great pain in the left side, in the region of the bladder; swelling of the abdomen; bowels much confined. A dose of castor oil was given, but immediately vomited up. An enema, and a minim of croton oil, failing to take effect, the enema was repeated, and half a minim of croton oil, with two grains of calomel, was given every three hours. Pulse 90, natural.

28. Swelling of the abdomen, and tympanitic sound greatly increased; bowels still confined; extreme pain over the left side of the bladder; urine still very small in quantity, and bloody. Two drachms of carbonate of magnesia in two ounces of water, directly. Thirty-six leeches to the left side, in the region of the bladder; fomentations afterwards. Two grains of calomel and half a grain of opium every four hours. A mixture, composed of three minims of hydrocyanic acid, in four ounces of water, a table-spoonful every third hour. Pulse 100, and weak; tongue dry, and furred.

Three o'clock, P.M. Had a copious watery evacuation, well tinged with bile, and the purging continued every hour during the night.

29. Feels much relieved; pain greatly diminished; purging ceased at eight o'clock. Omit the hydrocyanic acid; to have some tragacanth, and liquor potassæ.

Three o'clock, P.M. Omit the calomel and opium. Six grains of hyrdrarg. cum creta, with half a grain of opium, every three hours. Pulse 120, small; countenance anxious; extremities cold, with clammy perspiration.

Nine o'clock. Still sinking; a small quantity of gin ordered. No inclination to sleep; urine slightly increased in quantity, but still bloody; bowels confined.

30. Gradually got weaker, and died at twelve, P.M.

In lecturing on this case, Mr. LISTON observed, that when he performed the operation he was ignorant of some circumstances which had since come to his knowledge. The individual who had officiated as house-surgeon, *pro tempore*, had also omitted to state some circumstances regarding the after-treatment, which materially affected the issue of the case, and which he (Mr. LISTON) was now painfully compelled to mention. When he first sounded the patient he easily detected two stones, neither of which was large, and the case seemed to be favourable for lithotrity, no circumstances appearing to counter-indicate the operation, the patient himself being anxious for its performance. The urine was tested, and was found to be but slightly albuminous. They had seen at the operation that after injecting the bladder he had experienced little difficulty in introducing the lithotrite. There was a slight stoppage at the triangular ligament, but this was readily overcome by the partial withdrawal of the instrument, and passing the point lower. One of the stones was easily seized and broken up, the patient suffering little, and losing scarcely any blood. Indeed, very little force was used or required. The patient suffered so little that the scoop was introduced twice, and several portions of the stone were seized, pulverized, and removed. So completely was it broken, that the nucleus was extracted on the second introduction of the scoop. After the operation the patient, who had complained very little of any part of the process, walked up stairs to bed, unassisted. He, Mr. L., had since found that the patient had passed a very restless night previous to the operation; that he had made little urine, and was very feverish. In the reports of the case on the 27th, some very important circumstances had been omitted

by the house-surgeon, who, it appears, having mistaken the suppression of urine for retention, endeavoured to introduce a catheter a long time without success. A gentleman who witnessed the proceeding thus describes it, in a letter, dated July 5th:—"I think he may have torn the urethra when I saw him; he had been some time trying to pass an instrument; there was plenty of blood; he fancied that the instrument was passed, and that he could feel it grating on some sand, but I think that what he felt was caused by the eyes of the catheter rubbing over the sides of the torn urethra. I am certain he was not in the bladder when he fancied that he was." The catheter was again introduced, contrary to his (Mr. Liston's) orders. The parts were, after death, carefully dissected by Mr. Taylor. The urethra was severely lacerated in two parts, each admitting the point of a bougie; one passing from the membranous portion into the substance of the prostate, another from the apex of that gland, under its capsule.* The bladder contained one entire stone, and many fragments of another. There was a cyst opening from the bladder, filled with puriform matter, the cellular tissue being broken down. One of the kidneys contained stones of various sizes; the other was proceeding to disorganization; the patient, therefore, could not have been cured. He (Mr. Liston) considered it proper to state these facts, both on his own account and on account of lithotrity itself, than the performance of which, as an operation, nothing could have proceeded more satisfactorily. He was, however, misled respecting the state of the patient on the morning of the operation. The ill success of the case was mainly attributable to the lesions which he had named, so sure were untoward and unnecessary attempts to pass a catheter, when the bladder was empty, to tend to an unfortunate result in such a case, the bladder being, during the operation, as they saw, occupied by a sufficient quantity of fluid, and the whole process being conducted with the utmost care and gentleness. Mr. Liston further remarked, that the operation of lithotrity, if well understood, would, in many cases, if the subjects for its performance were properly chosen, do away with the necessity of cutting. Patients, under the prospect of so easy a means of relief, would apply early to the surgeon, and the cure would consequently be rendered so much the easier. The instruments had been so much simplified and improved of late years, that the operation was now by no means a formidable one, and was attended with none of those dangers to which it was liable when the complicated and inefficient apparatus was first brought into use.

* The poor old man complained, again and again, that he had suffered twenty times more in the attempts made with the catheter in the night, than he had done during the operation.—Rep. L.

LARGE ANEURYSM BY ANASTAMOSIS, TREATED BY INCISION AND LIGATURE.

S. S., aged 67, labourer, was admitted June 24th. Eight months since he perceived a small tumour of about the size of a nut, upon the right hip. He attributed it to the irritation caused by a truss which he wore at the time for a hernia. The swelling gradually increased, causing great pain and inconvenience, until it attained its present size, about as large as two fists. It appears to consist of a congeries of vessels, which distinctly pulsate; by constant and equal pressure the tumour can be lessened to half its bulk, but on the pressure being removed it quickly resumes its usual size. Some weeks since the surgeon who attended him made an incision around the base of one side of the tumour and at some distance from it, but owing to the great loss of blood the operation was not completed, and the hæmorrhage was only arrested by the application of the actual cautery. His general health has been pretty good during the whole time.

June 26. Mr. Liston operated on the tumour by incision and ligature, in the mode he practises in certain cases of nævi, and which has already been described in this Journal, without the patient losing more than three ounces of blood. Soon after the operation the heat of the tumour was diminished, and it gradually became quite cold.

27th. Tumour cold, shrivelled, and vesications have appeared on it; less pain.

28. Patient comfortable. Mr. Liston partly detached the tumour from its base, with a pair of scissors.

29. Passed a good night. Tumour, to day, entirely removed, and a yeast poultice applied to its base.

July 2. Healthy granulations appearing; patient's general health excellent; sloughs separating; water dressing.

Aug. 7. The patient has been going on well since last report, the wound is cicatrizing, and his general health is good.

Mr. Liston remarked, that this was a very good specimen of what Mr. John Bell denominated "aneurysm by anastamosis." The tumour in this instance was unusually large.

HOSPITAL OF SICK CHILDREN, PARIS.

CHOREA.

DEATH OCCURRING DURING THE DISEASE.—POST-MORTEM APPEARANCES.

It is very seldom that we have an opportunity of examining the body of a child who has died while labouring under chorea.

Indeed, so rarely does this occur in private practice, that Dr. Cheyne assures me he never saw a child who died while affected with this complaint, and for this reason he omits to treat of it in his essays on the diseases of children. The following is one of the few cases which I witnessed while attending the Children's Hospital at Paris:—

Case.—Caroline Gillet, twelve years of age, was received into the hospital, under the care of M. Baudelocque, on the 26th of January, 1836. This child, though commonly enjoying good health, has a sickly, washy appearance, and has been subject, from time to time, to attacks of headach. The disease is not apparently of long standing; about fifteen days back she experienced some pains along the spine, which were soon followed by weakness, and irregular movements in the right upper extremity. This arm became gradually weaker, and the movements extended to the whole of the right side.

On examining the child on the following day, we found symptoms of chorea in a moderate degree. The right arm was almost constantly in movement; the hand was unable to grasp any object which we offered; but the muscles of the face were only slightly affected; the child could speak well enough: progression was not impeded.

As the child had passed some worms near the latter end of the year 1835, M. Baudelocque ordered some infusion of Corsican moss, an anthelmintic much employed at the Children's Hospital. Quarter diet.

This treatment was continued up to the 7th of February, without producing any evacuation of worms; but with the effect of diminishing the irregularity of the movements in the right side of the body. Every thing seemed going on well, when the patient was seized, on the evening of the 7th, with the prodromes of small-pox. The fever very soon assumed an ataxic character, and the symptoms of chorea became even more violent than before the child's entrance into the hospital. The progress of the eruption was very irregular, and the patient lay almost constantly in a state of low delirium. These symptoms continued, with but little modification, for a week, and the patient sank on the night of the 15th of February.

Body examined twenty-one hours after death.—The spinal marrow was the first part examined. Its membranes seemed perfectly healthy, free from injection, or any trace of inflammation. The substance of the spinal marrow itself was divided in small portions, from one end to another, and did not show any trace of tubercular deposit, or any change in its consistency or colour. The lower part of the cavity of the arachnoid contained about half a spoonful of clear serum.

Cranium.—Dura mater normal; arachnoid free from thickening or opacity. The pia mater of the upper surface of the brain was, however, considerably injected, but did not adhere, at any part, to the cortical substance. On dividing the brain into slices, it appeared a little more vascular than is natural, but we could perceive no trace of any other change, although the central parts, base of the brain, and cerebellum were examined with great minuteness. The lateral ventricles contained about a teaspoonful of fluid.

Thorax.—Heart and great vessels normal. The lungs show several points of lobular pneumonia.

Abdomen.—Stomach healthy; intestinal canal irregularly injected at several points, but free from marks of inflammation. No worm found in its cavity.

A great deal has been said and written on the pathological anatomy of chorea. Indeed, almost every writer seems to have a theory of his own. This, I believe, depends a good deal on the want of opportunities of examining patients actually labouring under this disease at the moment of death. I have seen three such examinations, and the result of what I have witnessed is to convince me that chorea has no morbid appearances essentially belonging to it; in other words, that it depends on a functional disorder of the nervous system, attended either with fugitive lesions, or with some of those modifications of organization which the anatomist's scalpel will never probably be able to detect. This idea is, moreover, borne out by the rapid effects sometimes following the administration of a cold bath in this disease.

P. H. Green.

WESTMINSTER HOSPITAL.

SUCCESSFUL PARACENTESIS THORACIS.

Patrick Griffith, ætat. 40, admitted on the 1st of the month, with the following symptoms:—Difficulty of breathing, without pain; a sense of constriction across the inferior part of the chest, and of fulness in the præcordia; respiration frequent, short, and thoracic; the shoulders high; a suffocating cough; cannot lie perfectly recumbent, but is easy when the trunk rests on an inclined plane of about 45°; occasional orthopnœa; face bloated and dusky; lips livid, and eyes prosilient; tongue clean and moist; pulse frequent, but soft; no feverishness; urine scanty and deep-coloured; slight anorexia; in the left side of the thorax the respiration and resonance are *well*; the heart pulsates in the inferior and middle sternal regions, and its impulse extends to the right of the mediastinum instead of to the left; he lies with comfort on the affected

side, but cannot recline upon the unaffected side; of this the rationale is obvious, the ribs rested upon, being, of course, quiescent, and the onus of respiration thrown upon the upper ribs.

Six weeks previous to admission he had obtuse pain in the left side, attended with dyspnœa, which forced him to desist from work. He was bled and blistered, &c., but the dyspnœa was not subdued, and continued until his admission into the hospital. He has for years been subject to attacks of bronchial catarrh and expectoration.

2nd. The dyspnœa during the night was distressing, and this morning produced in the patient's respiratory apparatus, an assemblage of symptoms resembling asphyxia. To recover this distress it was determined to draw off the fluid which was supposed to exist in the left pleural bag. Mr. Hale Thomson introduced a flattish trocar through the sixth intercostal space near the angle of the ribs, and two pints of clear deep-straw coloured serum were evacuated. On the canula being withdrawn, a few bubbles of air passed through it into the chest. Immediately after the paracentesis the dyspnœa was signally relieved.

3rd. The serum, yesterday, drawn from the patient coagulated by heat into a solid mass; the respiration has been comparatively easy ever since; he is able to lie more horizontally; he passed a tranquil night, and had a tolerably refreshing sleep; his breath is much less heaving and laborious, each act of respiration being shorter, and unaccompanied by the same appearance as before the operation; the appetite is a little improved; the pulse frequent, without indicating fever; in the interscapular space, and describing a circle, round the root of the left lung, of several inches diameter, the respiratory murmur is now heard; a little œdema visible round the edge of the wound, and a blush of redness; a medicinal slosh of magnesia, Epsom salts, and *beaume de vie* to be taken thrice a day, and two grains of blue pill, with a little colocynth every night.

7th. Last night Mr. Thomson performed paracentesis again in the same place, and drew off 46 ounces of brownish serum. No air was admitted this time. The dyspnœa, which had returned to a most painful degree, was instantly relieved by the operation, and much more suddenly and completely than the first time. He slept well last night, and feels comfortable this morning; his bowels have been acted upon by a dose of senna; his appetite is better; respiration is heard in the inter scapular spaces for five fingers' breadth, and slightly under the clavicle. A grain of calomel to be taken three times a day, and a black draught to morrow morning; his expectoration is free, and the sputa are muco-purulent; he is allowed a mutton chop and extra bread.

12th. Mr. Thomson yesterday performed paracentesis, for the third time, in the same intercostal space, and abstracted 36 ounces of serum of a lighter colour than the former, and quite clear; it was also thinner than on the two other occasions; the dyspnœa had not attained the same degree of aggravation; his health has unequivocally improved.

13th. He passed a disturbed night; he had rigors at midnight, attended with severe headach, and a sense of fulness. This morning, however, he is manifestly better, and his breathing is easy. A blister to be applied to the sternum, and the following pill to be taken three times a day:—Take of *Powdered foxglove*, a grain; *Calomel*, half a grain; *Powdered squill root*, a grain. Mix with some vehicle, and form a pill. An occasional purging draught, with jalap, colchicum, and hyoscyamus to be administered. Under this plan he gradually amended; it was not found necessary to repeat the paracentesis, and about a month ago he was permitted to go to work. At the time of his exit from the hospital the heart had moved more towards its normal position, but it was still unnaturally low down. The respiration was audible at the upper and anterior part of the thorax, and obscurely so in the posterior and inferior phases of that region. On the left side there was great contraction or *retreciissement* of the costal arch, and percussion elicited there duller responses.

HYSTERIA FROM EXCESSIVE DEPLETION.

Sophia Marchand, ætat. 43, admitted, complaining of some pain in the lumbar region and along the spine, and of inability to support her weight. There was great tenderness along the entire course of the spine, and general lassitude; anorexia; numbness, and diminished temperature of the lower extremities. At Christmas, 1835, she caught cold, and an attack of pneumonia supervened. For the removal of this affliction, leeches and blisters were applied, and she was let blood from the veins of the arm to an enormous extent. At one venesection *forty* ounces were abstracted. The inflammation was subdued by these outrageously antiphlogistic measures, but the prostration was so great that the patient did not rise from her bed till the subsequent February. At that period of partial convalescence she was attacked by a severe pain along the whole spinal column. Various remedies were tried by her medical attendants, but hot fomentations alone afforded her any benefit, and that was but temporary. On admission, she had the following symptoms: There is pain along the whole spine, but it is greatest in the cervical portion, and over the sacrum. This pain is not any where increased by pressure; there is no unusual projection of any of the spinous processes of the vertebræ; sensation and volition slightly impaired on the nether limb; menstruation imperfect and irregular.

A scruple of compound scammony powder to be taken every other night, and a saline aperient draught on each subsequent morning. The moxa to be daily applied as a rubefacient over the affected vertebræ.

The above plan of treatment was unremittingly pursued for three months, without the slightest beneficial influence upon one of the symptoms, and she left the hospital exactly in the same state in which she entered it. She went forthwith into the country, where regular exercise, good diet, and wholesome mental occupation, without the assistance of any medical treatment whatever, produced a rapid amelioration, and she is, at this moment, in all respects well.

FRACTURE OF THE SKULL BY A PIECE OF WADDING THROWN FROM A MORTAR.

William Jones, a fine boy, eleven years old, was admitted on the 20th of May. He was in St. James's-park, close to one of the mortars which were fired off on the occasion of the Princess Victoria's birth-day. A piece of wadding from one of the howitzers fell on his head, and struck him insensible to the ground. He was immediately brought to the hospital. He recollected receiving the blow, but was unconscious during his transit to the institution. He was sensible, however, almost the minute after admission; there was a large bruised wound in the scalp. On examination, a fracture of the frontal bone, just above the temporal ridge of the right side, was detected, and a small angular fragment was slightly depressed. An attempt was made to raise the depressed portion, but without succeeding.

He was put to bed, and had cold lotion constantly applied over the injured integuments. In the afternoon he had headach, and at eight, P.M., he became hot and restless. Mr. Thomson saw him at half-past eleven, P.M., phlebotomized him to eight ounces, and administered a purge.

29. He had a very good night. This morning he has exhibited a disposition to sleep. Another aperient is given to him. Pulse 96.

30. He is obviously better. There is no headach; pulse natural; tongue clean; his bowels are freely open.

31. He is restless, and feels unwell; headach, thirst, hot skin, the tongue moist. The following mixture was prescribed:—

Take of *antimonial wine*, 2 drachms; *dilute acetic acid*, 2 drachms; *water*, half a pint. Mix. An ounce for a dose every two hours.

Vespére. He is better. Mr. Thomson ordered a bread-and-water poultice to be applied to the wound.

June 1. He is free from pain. A purge is given.

2. No pain; a discharge of bloody serum proceeds from the wound, and apparently from under the bone.

5. He has no bad symptoms; the discharge aforementioned still continues; he complains of hunger, and is allowed rice-pudding.

14. Nothing remarkable has occurred in the case till to-day; a considerable quantity of offensive pus flowed from the cranial fissure.

July 1. He has gradually improved to this date; granulations have sprung up from the edges of the bone.

SAMUEL RUMSEY'S CASE,

(Continued since the 21st day of March last.)

Cold lotions were applied for a week after the operation; at the end of that time he got up daily. The wound continued to heal, being filled up with granulations; during the time of cicatrization slight contraction took place. A second incision was made, chiefly at the outer angle of the wound, about three weeks after the first operation, in order to prevent the retraction of the palpebra superior. After this the upper eyelid remained over the ball, and he had evidently the power of raising it to a small extent.

The cicatrization advanced again, and was again attended with a slight contraction. The under lid was very useful, being entirely under the control of the patient, and enabling him to clear off any foreign substance from the surface of the eye.

April 28. This day the patient insisted upon going out of the hospital. The upper lip lies quiescently over the eye ball, but there is a slight eversion of the tarsus; the lid also projects more than natural. The under lid covers half the globe of the eye. The cornea is still opaque, but the patient thinks he can see a little better. The iris is still adherent at its central edge, to the corner.

The patient's other eye remains in the state described already in THE LANCET.

SURGICAL STATISTICS

OF THE HOSPITAL OF THE HOLY GHOST,

AT ROME,

FOR THE YEAR 1835.

The capital operations performed at this hospital during the year 1835, were—

Lithotomy, eight cases, producing two deaths and six recoveries. A boy, six years of age, who had laboured under stone for two years, was operated on after Celsus's method. Two large stones were extracted, and in twenty days the child was quite well. The lateral operation was performed, in five cases, on persons of 5, 10, 14, 16, and 18 years of age. Of these, four were cured between the 20th and 25th days. The fifth did not leave the hospital before the 52d

day. The unsuccessful cases occurred in patients of 14 and 24 years of age. The first had suffered from the disease for ten years; the second, since childhood. One patient died on the 7th day, the other on the 40th. In both cases the bladder was found much thickened, and the mucous membrane in a state of ulceration. In addition to other unfavourable circumstances attending these cases, the calculi were so large as to require the high operation.

Cataract.—Six cases were operated on by the method of simple depression (*sclerotico-conyxis*). In four cases both eyes were affected. With the exception of one patient, who was suffering under traumatic cataract, with injury of the optic nerve, all recovered their sight more or less. In one case it was necessary to repeat the operation after the lapse of twenty-eight days.

Strangulated Hernia occurred only twice, and in both the operation succeeded.

Amputations.—Three capital amputations occurred, two of the thigh, occasioned by comminuted fracture. Those patients died. In a case of fracture of the forearm, which was followed by long-continued suppuration, the limb was removed at the upper third of the humerus, with success.

Paracentesis of the Bladder was performed on a man, 35 years of age, who was afflicted with retention of urine. The catheter remained in the bladder for fourteen days; in the meantime the obstacle, near the neck of this organ, was overcome, and the patient cured.

A Sarcomatous Testicle was removed, but the patient died in three months. The operation promised, at first, the best success, as the chord was free from disease, but the wound became gangrenous.

Fistula in Ano, in ten cases, was cured by division.

A circumscribed false *aneurysm*, at the bend of the arm, produced by venesection, was cured by compression.—*Zeitschrift für die Ges. Med.*, Vol. iv., No. 1, p. 127.

IRREGULAR ATTENDANCE OF THE MEDICAL OFFICERS OF HOSPITALS.

(*From a Correspondent.*)—The serious loss of time which students experience when waiting for the "going round" of the physicians or surgeons at some of our hospitals, is a subject of just and frequent complaint, many of the worthy functionaries being frequently an hour, or more, beyond the specified time of their visit; while others, instead of making *three* "walks" during the week, sometimes only make *one*. A fact or two, illustrative of these abuses, have lately come to our knowledge. A student, "fresh and green from the country," and who took all that is mentioned in the prospectuses of the schools for "gospel," being anxious to go round with the surgeon of an hospital, went there at the specied time, when, after waiting for half an hour, he inquired of the porter, "at what time Mr. So-and-So went round?"—"That, Sir," said the cautious and facetious door-keeper, depends on what time he *comes*. I have no doubt, however, that you will see him here, between now and three o'clock." It being then only half-past one, the visitor, not wishing to stop so long on an uncertainty, made his way homewards, calling on his road at another hospital, to ascertain if he could learn anything more satisfactory *there*. "Pray what day, does Mr.—go round," said the young gentleman? "Why, Sir, he goes round *to-day*. No, I am wrong, it is *to-morrow*, or the *next day*; but really, Sir, he is so uncertain, that I cannot precisely inform you when he goes round." Is it to be wondered at that, with such management, the wards of the two hospitals in question, contain few patients, and are frequented by fewer students?

ROYAL COLLEGE OF SURGEONS:—We beg to refer our readers to the cover of this week's LANCET for some advertisements of the College of Surgeons, relating the Jacksonian and Collegial Triennial Prizes, for 1838 and 1840, and the temporary closing of the Museum in Lincoln's-Inn-Fields.

CORRESPONDENCE.

Dr. J. P. Simon informs us that he considers "magnetism and electricity to be two distinct agents in nature, although they seem to be capable of producing nearly the same phenomena, and that they are destined to perform very different offices in creation, although the one cannot be excited without eliciting the other." Having afforded Dr. S. this opportunity of recording, in print, his claim to rank amongst the theorists of the day, we must await the supply of proof before publishing any thing farther connected with his speculations, which, however, should make their way before the scientific world in a separate pamphlet or volume instead of in the pages of a weekly periodical.

Mr Pode's letter next week.

H. The Society admits that it cannot effect what is desired, openly and avowedly. The advice of our correspondent is therefore useless. There are many good and conscientious men who regard the proposed means for "entrapping the Chinese," as perfectly justified by the object. The celebrated sectarian, St. Simon, made a similar kind of effort in France, under the impression that medical men have, above all other persons, "the ear" of society, and possess better opportunities of inculcating such opinions as they may become anxious to diffuse.